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HIGH BUILDINGS on NARROW STREETS

Being Extracts from a Paper Delivered Before the Fifty-Fourth Annual Convention of the American Institute of Architects

By HARVEY W. CORBETT, F.A.I.A.

WHEN I came into the building this morning I was met in the corridor by a delegate who said: "I understand that you are going to tell us how to plan high buildings. Now, that really is not necessary. We know how to plan high buildings. I wish you would tell us how to get high buildings to plan." (Laughter) I do not propose to tell you how to plan buildings, and I do not see how I can tell you how to get high buildings to plan because all those that I know about I am planning myself. (Laughter)

I was somewhat worried when I got the title of this discussion, "Planning High Buildings for Narrow Streets." I was afraid it might be turned into the form of a question, "What shall be done to an architect who plans high buildings on narrow streets?" (Laughter) I was afraid I might be sentenced to a life of hard labor in the lower story of one of these high buildings, where sunshine never by any chance penetrates.

FISK BUILDING, BROADWAY AND FIFTY-SEVENTH STREET, NEW YORK

Architecture, we are told, is an expression always of the people of any given period. I sometimes wonder if our present New York architecture is an expression of the New York people. Certainly, as you come up the Bay, especially as you come in a steamer from the other side, and get your first view of New York, it is an impressive and imposing sight. I think that probably the American people are impressive and imposing people.

But as you get farther up the river and get a side view of New York, there seems to be a certain amount of "jazz" in outline, and I am afraid that if you get a side view of the New York people you find the same amount of "jazz." (Laughter)

Perhaps the most characteristic feature of the American people is given in that old-fashioned expression of "putting up a bold front." We, as architects, do a great deal of that. We put up bold fronts. We do not put up sides and backs and tops to go along with those bold fronts. (Applause and laughter)

A foreign architect whom I asked once to give me an opinion of his visit to New York as concisely as he could, said, "Streets without end. Fronts without sides. Signs. Penthouses and tanks." (Laughter)

Now, carrying this idea of architecture as an expression of a people further, I think that our present architecture is a very clear-cut expression of our present democracy. It is a democracy in which there is so much freedom that every man is free to do exactly as he pleases, without the slightest regard for his neighbors; and the conditions under that form of democracy have been carried to such an extent in New York City that we have been

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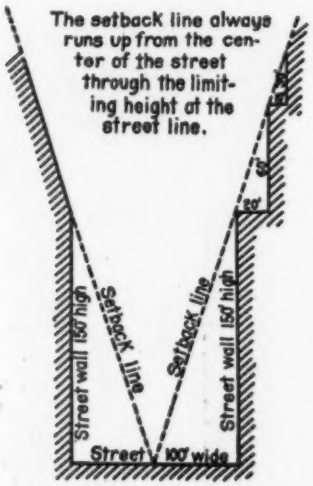
obliged to create a law making it impossible for that situation to continue.

Speaking of building laws, I want to discuss particularly examples of the changes which have occurred, due to the new law in New York; but, before discussing this law, I would like to call your attention to the law in the city of London, with which I have had some contact and conflict in the

SETBACK PRINCIPLE.

Typical example in a 1½ times district, for streets 50' to 100' wide.


The setback line always runs up from the center of the street through the limiting height at the street line.
50'
20'
Setback line
Setback line
Street wall 150' high
Street wall 150' high
Street 100' wide

last few years. There the law was not brought about in such a systematic and thoroughly studied manner as the New York law. Queen Victoria happened to look out of her bedroom window one morning and across the trees of St. James Park she saw something architecturally extremely ugly which was rising above these trees. She made an investigation at once, called in her ministers, and had a law passed limiting all future buildings in London to eighty feet in height to the cornice line, with two stories and a roof, and a sort of a mansard. The particular building which inspired this law still exists. It has an excessive height of twelve stories. Just imagine—twelve entire stories; and it is exceedingly ugly. This is the only example that I know where humanity has directly benefited through a piece of perfectly ugly architecture. (Laughter)

I want to read you the general principles on which this law which we have discussed, in New York, is founded. "The law was framed to stabilize and confirm property values, to relieve the rapidly increasing congestion in the streets and in the transit lines, and provide for a reasonable amount of light and air in the buildings and in the streets, and in general to make the business of the city more efficient and the life of the city more healthful, convenient and agreeable."

That law has been in operation since July 27, 1915, and judging from what it proposes to do, I do not want you all immediately to move to New York on the theory that the millennium has arrived, because, while the law is in operation, it has not quite resulted in making the city very much more convenient, beautiful or agreeable; but it has done, or is doing a very great work.

I am going to confine my effort principally to that part of the law which affects the height of buildings, although I must explain to you that this law is tied up very definitely with a zoning system as to the use to which buildings may be put, and that the height law varies in different parts of the city. The law, in principle, is simply this, that on any given street the building line on a principal front may go to a height which is a factor of the width of the street. Then a line drawn from the middle of the street through that corner goes on indefinitely, and a building continuing above that height must remain back of that line.

In London, for instance, this height would be

FIG. 2. GOTHAM NATIONAL BANK BUILDING, COLUMBUS CIRCLE, NEW YORK

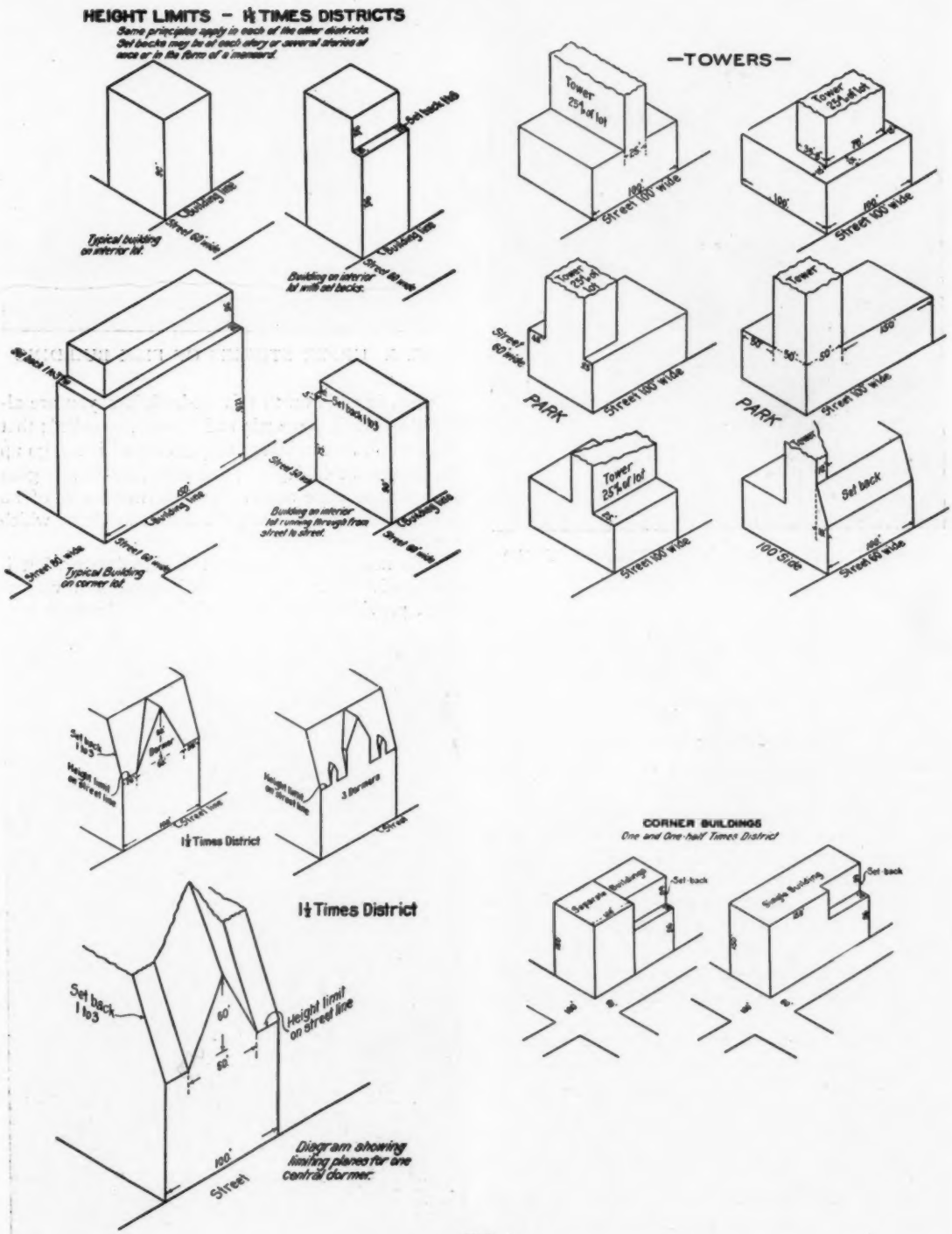

HEIGHT LIMITS – 1½ TIMES DISTRICTS
Some principles apply in each of the other districts. Set backs may be at each story or several stories at once or in the form of a inverted.
Typical building on interior lot.
Building on interior lot with set backs.
Typical Building on corner lot.
Building on interior lot running through from street to street.
—TOWERS—
Tower 25% of lot
Street 100' wide
PARK
Set back
100' Side
1½ Times District
Set back 1 to 3
Height limit on street line
Diagram showing limiting planes for one central dormer.
CORNER BUILDINGS
One and One-half Times District
Separate Building
Set back
Single Building

FIG. 1
NEW YORK CITY ZONE LAW DIAGRAMS

FIG. 3. LIGGETT BUILDING, FORTY-SECOND STREET, NEW YORK

limited to a definite height of eighty feet, irrespective of the width of the street. In Paris, and other European cities the height varies with the width of the street. In New York the city is zoned, first for a maximum of two and a half times the width of the street, then in other sections twice the width of the street, and one and a half times, and finally once the width of the street. The reason for this was that if we had made, with the conditions in New York as they are, a law which was uniform for the city, it would have worked a tremendous hardship on property owners in those sections of the city such as lower Manhattan, where the existing types of buildings had developed a certain property value; and it would have made it impossible for future property returns to be the same on that value unless the law allowed a condition practically similar to that already existing.

The law, as you see, operates depending on the factor of the street. In some cases you will be in the one and a half district, on a street 100 feet wide, and that allows you 100 feet direct height, then, set back in proportion to these relations, you could carry the building back in the form of a mansard without any offset at all. That gives you a condition upon the corner something like (Fig. 1), where it drops off at a given point at the center. In a street 60 feet wide, if the height law permitted, we would have this condition (indicating). These set-backs are not necessary unless a man wishes to go above the restricted height.

FIG. 5. UPPER STORIES OF FISK BUILDING

Then, in addition to this set-back law, you are allowed a certain proportion of dormer, so called; that is, in a 100 foot building, 60 per cent of it can go up in a dormer at 45 degrees, and then that dormer goes back on the same angle. That forms a sort of an envelope of a rather irregular shape, inside of which the building must remain.

This need not all be taken in one dormer, but it can be divided up in a series of dormers of various sizes, provided the total width of the dormers does

FIG. 4. REAR VIEW OF FISK BUILDING, BROADWAY AND 57th STREET, NEW YORK

not exceed 60 per cent of the width of the building.

New York has today so many towers and tower buildings, many of them of such interesting silhouette and composition, architecturally speaking, that the drafters of this law concluded that it would be a mistake to prohibit towers, and to prohibit buildings which went to unusual heights. With New York and its skyline as it is, certainly additional towers will not detract from the present outline; so they have this additional clause which permits, on any given piece of property, a tower of indefinite height over 25 per cent of the lot. That means that the tower over 25 per cent of the lot may rise from the center of the lot or from one end of a building; or it may take a different shape. The only limits placed on the height of that tower would be structural limits, and the limits of course that the owner himself would impose through the use of elevators.

Fig. 2 is one of the examples that has just been completed in New York, the Gotham Bank Building, at 58th Street near Columbus Circle. There we see the use that is made of the dormer idea. You see the whole face of this building is turned into a dormer which lifts up, showing on the face, as is permitted, 60 per cent. Then the set-back occurs, with some degree of variation. The side-walls, of course, remain straight, and each course remains straight; but it seems that the fact that it is necessary to design these set-backs has made the architects look at these buildings from every angle. While this building is an example of carrying this to the extreme of the altitude permitted by the law, yet I believe that it illustrates very successfully the improvement which this law has made in the contour of buildings as compared to the old idea of the box, of which we have so many examples in New York.

Fig. 3 was the best view that I could get of the Liggett Building on 42nd street, which shows here the set-back. They have taken advantage of the dormer idea and inserted a sort of a pier, ending in a break and set-back, then the next recess above that, obtaining a comparison in street silhouette with the neighboring building which goes right up, as the construction was under the old law, to the hard line of cornice.

Fig. 4 is the rear of the Fisk Building. That, of course, will be in all probability hidden by buildings; but we get an illustration of the set-backs here, as they are affected by the street line. In this particular building the architects have made a very interesting silhouette, not going exactly to the maximum that the law would permit, but taking advantage of certain structural conditions and making an outline that is interesting and successful. You get

FIG. 6. HECKSCHER BUILDING, FIFTH AVENUE AND 57th STREET, NEW YORK

FIG. 7. ANOTHER VIEW OF THE HECKSCHER BUILDING, FIFTH AVENUE AND 57th STREET, NEW YORK

the mass of the main front of the building, and it gives, I think, a very comprehensive idea of what this new law does for the silhouettes of high buildings. It is unfortunate, I think, of course, that these buildings could not be finished all the way around with the same idea; but in this particular case it has certainly been beautifully handled on three sides, and that is two sides more than it is generally handled on.

FIG. 8. NATIONAL ASSOCIATION BUILDING, WEST FORTY-THIRD STREET, NEW YORK

Fig. 5 shows the upper stories of the Fisk Building. The view down 59th street, or from the park, is very imposing, especially the silhouette of these masses and the relations of the corner masses filling in the contour.

Fig. 6 is the Heckscher Building, at 57th Street and Fifth avenue. There, again, we are getting a rear view, in which a certain amount of effort has been made to ornament the back. But you see they have gone clear back to a point which will take the line from the street center, which is allowed.

Fig. 7 is a view of the other side of that same building, and it is a very pleasing contour, especially of the roof and top. Now, that properly amounts to a tower. It is a skyscraper of the old idea, but more interesting certainly than the old buildings you see in the examples further down the street.

Fig. 8 illustrates one of the views very close to a building, showing again the set-backs, and at the top, the projecting dormer, which gives an added variety to the contour across the building. I think the handling of this in very delicate detail and without elaborate cornices is an excellent example of the practical solution of a commercial building, at least so far as its street front goes. There is not any pretense about it, and yet it does have a charm which the old type lacks entirely.

Fig. 9 is an example of two buildings on the same street, both built within the law, but illustrating a peculiar thing in the law, which is this. This building has opposite to it a 20-story building, as you see. The effect on that building is to permit it to go higher than its neighbors. The idea was that where a high building exists in the city, it seemed only fair that the buildings in the immediate neghborhood could also be high, although they could not possibly be permitted to go above the prevailing law; yet there is a certain percentage of amount authorized, at least one or two stories, that the building gains because

FIG. 9. REAR VIEW OF WURLITZER AND BUSH BUILDINGS, FORTY-SECOND STREET, NEW YORK

of the high building opposite to it, which others did not get. This would tend, as you can see, to the final development in the buildings of the city up to the maximum height, in having the building line sort of swing up to the tall buildings and down again.

This view of the Wurlitzer Building, Fig. 10,

(Continued on page 617)

Beaux-Arts Institute of Design

DIRECTOR OF THE INSTITUTE, LLOYD WARREN

ARCHITECTURE, RAYMOND M. HOOD
SCULPTURE, JOHN GREGORY

INTERIOR DECORATION, ERNEST F. TYLER
MURAL PAINTING, ERNEST C. PEIXOTTO

Official Notification of Awards—Judgment of April 19, 1921

SECOND PRELIMINARY COMPETITION FOR THE FOURTEENTH PARIS PRIZE

of the

SOCIETY OF BEAUX-ARTS ARCHITECTS

PROGRAM

The Annual Committee on the Paris Prize Proposes as subject of this Competition:

"A STADIUM FOR THE OLYMPIC GAMES"

The Commission in charge of the next Olympic Games has secured, about a mile from the outskirts of a large city, and connected with it by large boulevards and rapid transit lines, a large tract of ground upon which it proposes to erect the Stadium and all the dependencies necessary to insure the complete success of the games.

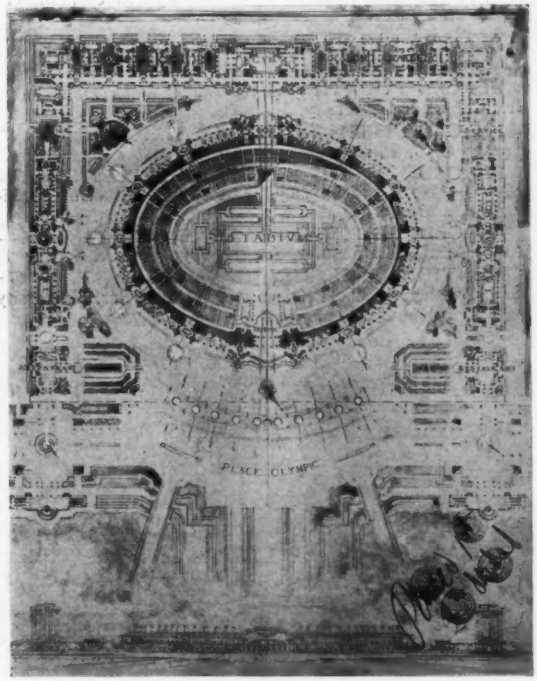
The problem is the treatment of this tract which includes:—

1. THE STADIUM:

This should be sufficiently large to seat about 100,000 people and should completely or partially enclose a quarter-mile running track within which are to be placed the football field and space for the various field events, including an open air pool 100 feet long for swimming and diving contests. There should be a monumental entrance to the field for the reception and the parade of the contestants from the different countries; this may also serve for the finish of the Marathon race. It is of the greatest importance to provide for the handling of the spectators through ticket entrances to various parts of the structure, and for their quick egress by means of stairs, ramps or otherwise.

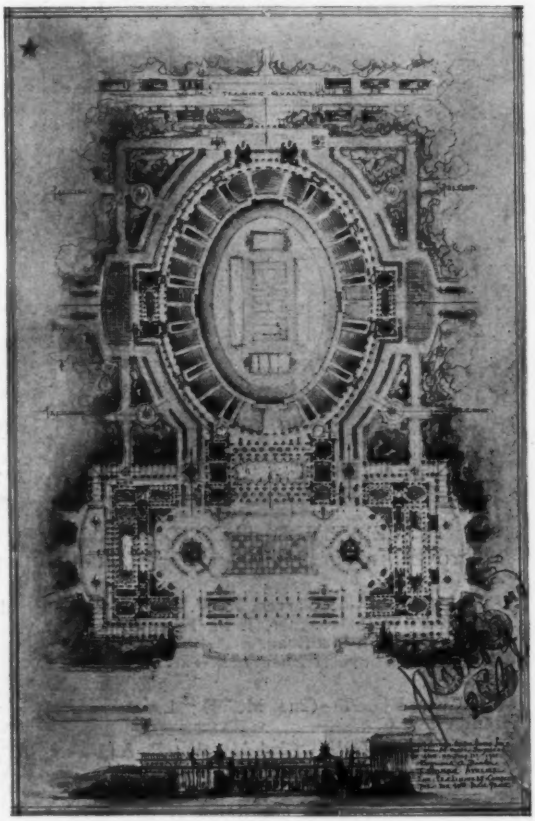
2. TRAINING QUARTERS FOR THE ATHLETES:

These may be located in places remote from the Stadium proper if desired, to insure quiet and isolation, and should consist of a dozen or more buildings—one for each country represented—providing living quarters, locker rooms, showers and training rooms.



PLACED FIRST—SECOND MEDAL

L. MORGAN — ATELIER HIRONS



PLACED SECOND—SECOND MEDAL

R. A. FISHER — "T" SQUARE CLUB

3. HOTEL ACCOMMODATION:

A hotel or hotels to accommodate about 5,000 people, so placed as to be convenient to the Stadium yet, if possible, out of the general path of circulation of the great crowds from the city. They should comprise all the necessary features of the modern hotel.

4. RESTAURANTS:

These are to provide for those who attend from the city or outlying districts.

5. PARKING SPACE FOR AUTOMOBILES:

This should be placed near the entrance to the grounds from the city and should have several entrances and exits.

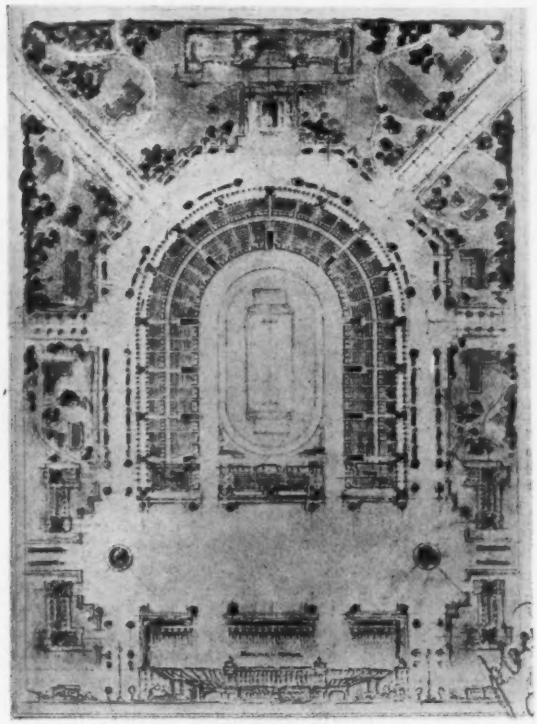
GENERAL:

Careful study should be given to the circulation and the handling of the spectators to insure quick and easy ingress

XUM

and egress and to avoid, as far as possible, interference between those coming from the city and those at the hotels within the Stadium grounds. Free entrance is permitted to the grounds, admission is charged only to the Stadium itself.

The size of the plot is 2,000 feet by 1,500 feet and is approximately level.



PLACED THIRD—SECOND MEDAL

A. WESTOVER, JR. "T" SQUARE CLUB

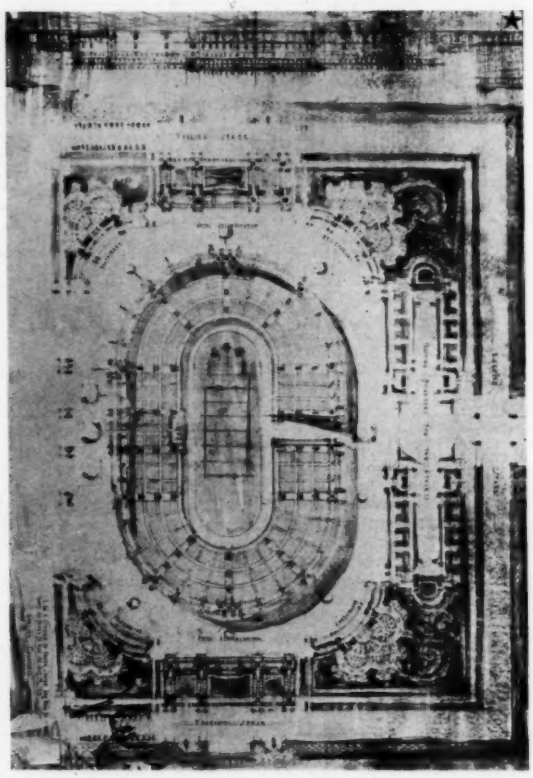
Jury of Award—L. Warren, B. W. Morris, R. M. Hood, J. W. Cross, W. S. Wagner, J. M. Howells, J. G. Rogers and H. O. Milliken-Chairman.

Number of Drawings Submitted:—25.

AWARDS:

PLACED FIRST—(2nd Medal); L. Morgan, Atelier Hirons, N. Y. C.

PLACED SECOND—(2nd Medal); R. A. Fisher, "T" Square Club, Phila.



PLACED FOURTH—SECOND MEDAL

J. G. SCHUHMANN, JR. COLUMBIA UNIVERSITY

PLACED THIRD—(2nd Medal); A. Westover, Jr., "T" Square Club, Phila.

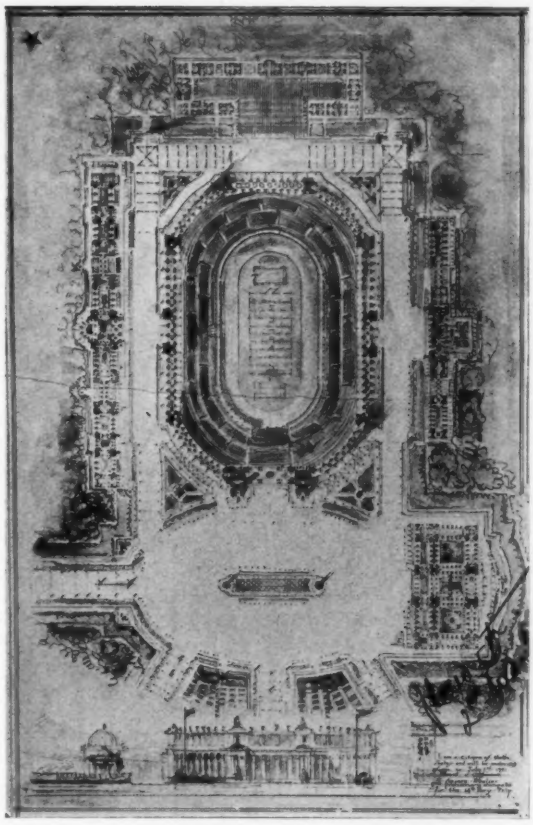
PLACED FOURTH—(2nd Medal); J. G. Schuhmann, Jr., Columbia University, N. Y. C.

PLACED FIFTH—(2nd Medal); H. S. Atkinson, "T" Square Club, Phila.

PLACED SIXTH—FIRST ALTERNATE—(3rd Medal); W. F. McCaughey, Jr., Chicago School of Architecture, Chicago.

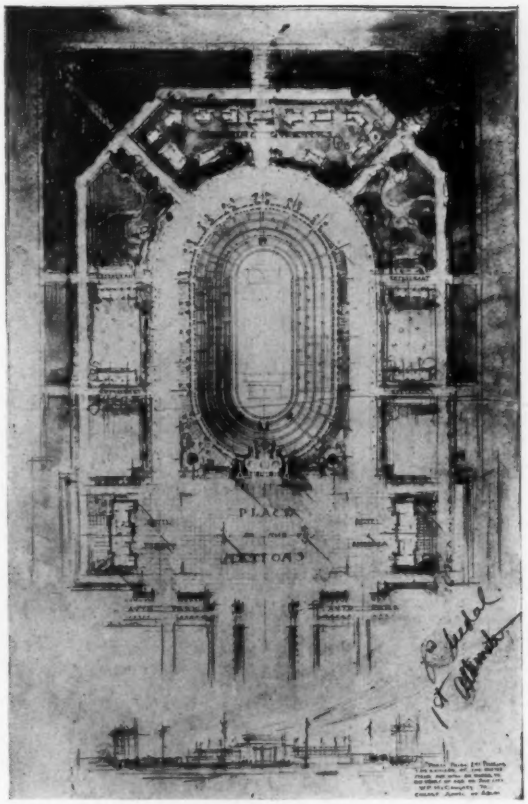
PLACED SEVENTH—SECOND ALTERNATE—(3rd Medal); L. Fentnor, Atelier Wynkoop, N. Y. C.

MENTION—R. H. Segal, 56 W. 46th St., N. Y. C.; S. J. Laschenski, O. M. Olsen and A. C. Bieler, University of Pennsylvania, Phila.

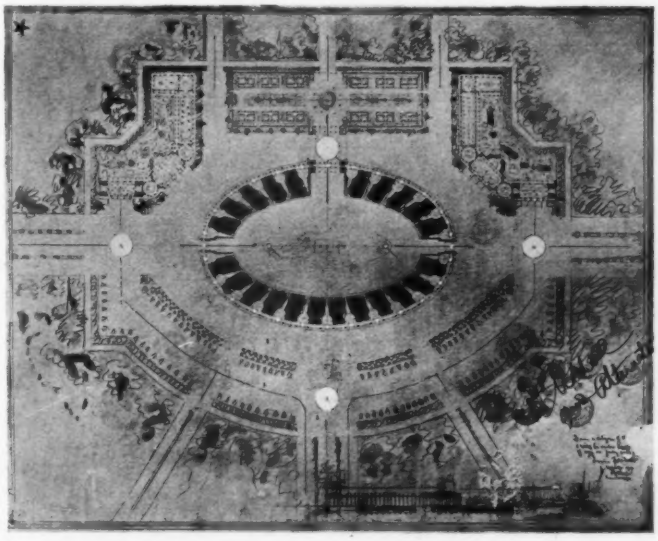


PLACED FIFTH—SECOND MEDAL

H. S. ATKINSON
"T" SQUARE CLUB, PHILADELPHIA, PA.



PLACED SIXTH (FIRST ALTERNATE)—
THIRD MEDAL
W. F. McCAUGHEY, JR.
CHICAGO SCHOOL OF ARCHITECTURE.



PLACED SEVENTH (SECOND ALTERNATE)—
THIRD MEDAL
L. FENTON ATELIER WYNKOOP

SECOND PRELIMINARY COMPETITION for the FOURTEENTH PARIS PRIZE

STUDENT WORK, BEAUX-ARTS INSTITUTE OF DESIGN

Kitchen Wing, Mount Vernon, Va.

(See reproduction of original drawing by O. R. Eggers on opposite page)

IN a previous issue there was presented a series of sketches made by Mr. Eggers during a visit to Mount Vernon, the home of George Washington, on the banks of the Potomac River.

The kitchen wing shown in the present sketch is reached by the arcaded passage which projects above the boxwood hedge. The low building at the left is the kitchen. Its large expanse was necessary in the preparation of the food for the Washington family and the many dependents that were required in the conduct of so large an estate. The wide, open kitchen fireplace stands as it did in Washington's time, and is equipped with the many and ingenious utensils that contributed to produce the sumptuous banquets that marked the hospitality of a Virginia gentleman.

Owing to the well directed work of a patriotic society of women, Mount Vernon and all of its dependent buildings have been restored, and are now maintained as nearly as possible as in Washington's time.

It was here that the lordly Fairfaxes, who owned much of the surrounding country, were accustomed to visit, and it will not require a wide stretch of imagination by those familiar with Colonial customs to imagine the great deeds of cookery that were performed in this kitchen when these and other illustrious people were guests at Mount Vernon.

KITCHEN WING, MOUNT VERNON, VA.
THE AMERICAN ARCHITECT Series of Early American Architecture

EDITORIAL

State Societies and the Institute

THE several State societies of architects were again invited to be the guests at the annual convention of the American Institute of Architects. This year there were representatives from Illinois, Indiana, New York, Michigan, Idaho and Florida, a total of seven delegates as compared with nineteen delegates last year. This does not necessarily indicate a lack of interest on the part of the State societies, but a patient waiting for the Institute to make a definite move by way of a medium for closer affiliation.

Few will doubt that it would be profitable for both organizations to have all architectural societies banded together for the mutual welfare of the entire profession. The State architectural societies are increasing in number every year; there are now twenty-one such societies having over 2,000 members. Their activities cover a wide range of problems purely local. The results obtained and obtainable are having a wide influence toward the betterment of the profession irrespective of affiliation.

It was through the efforts of the Illinois society that the first law governing the practice of architecture was spread on statute books. It is generally conceded that this law was the primary cause leading to the advancement of the curricula in the architectural departments of our technical institutes, colleges and universities throughout the land. Architectural education has greatly advanced through the opportunities and requirements resulting directly from the pressure and activities of State societies.

THEIR work in all local legislative matters pertaining in any way to building interests always brings about directly or indirectly a strong coalition of members and in a way that gives worth while results. It is difficult to understand how a public-spirited architect can today refuse to become a member of his State society, lending his hand and influence to forwarding and maintaining the splendid work that they are accomplishing; and always conducted under a code of ethics no less honorable than that recognized by the American Institute of Architects.

It is hoped that the Institute will not procrastinate in regard to the splendid opportunity of securing the friendly and much desired co-operation of the State societies. Many practical suggestions are to be had in the paper to be found on page 629 in this issue presented to the Institute on the last day of its convention by H. B. Wheelock, and signed by delegates from Illinois, Indiana, Michigan and Idaho. Their suggestions are opportune and show an earnest desire on the part of the societies for close co-operation in all matters pertaining to mutual architectural affairs.

Improving Farm Buildings

IT is now more than two years since this journal first directed attention to the necessity for the betterment of farm houses and their surroundings. Letters from Governors of agricultural states were published, each executive warmly approving the movement.

Similarly, many of the state agricultural colleges expressed approval by letters and stated willingness to lend assistance.

The American Institute of Architects appointed a committee on farm buildings. This committee has zealously worked to forward this movement, with but scant encouragement for a continuance of its efforts. It should be continued and stimulated by recognition of what it has done.

Institute Chapters were urged during the recent convention to follow the good example of the Minnesota Chapter and organize for the best development of the small house. Why not include farm buildings? Why forget the farmer who represents the first of our industries? Why not give the necessary consideration to his surroundings? How shall we keep our young men and women on the farms if we fail to take the same interest in their environment that we show to dwellers in our suburban communities?

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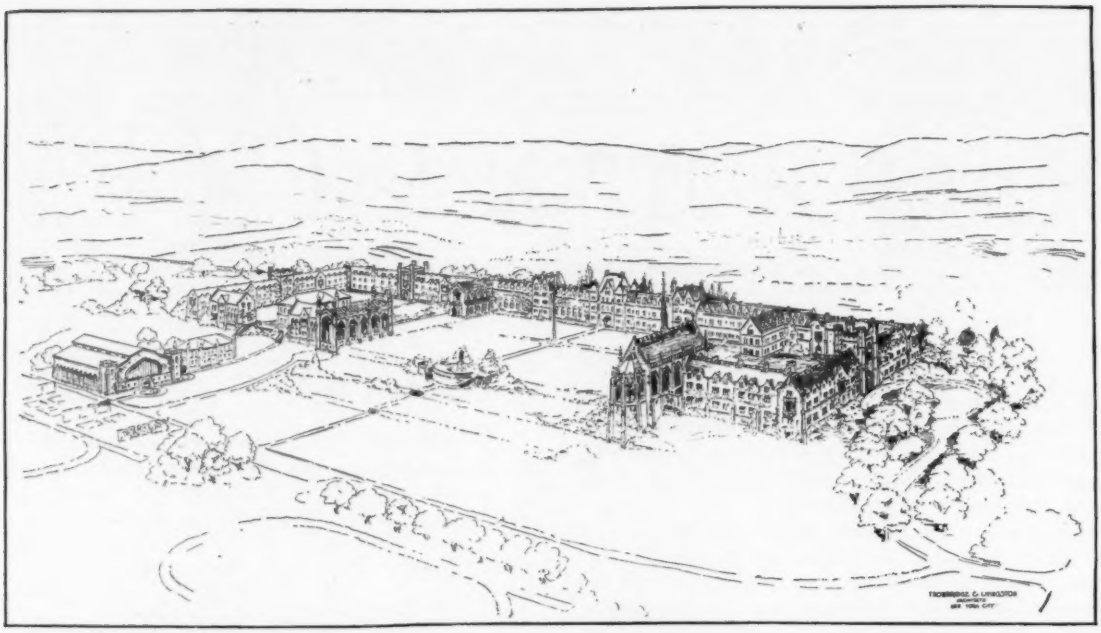


ARCHITECTURE of the SMALL COLLEGE

By S. B. P. Trowbridge, Sc.D.

In many respects we are, or have been, a nation of opportunists. We have used up our forests, we are using up our land, we waste our resources, without thought of the future. The same lack of foresight has characterized the planning of our cities, towns, institutions, and even our houses.

Most of our cities have been built up on the gridiron principle without regard to local conditions. Our institutions are too often conglomerations of different types of buildings in different styles of architecture, scattered about in haphazard fashion to satisfy temporary necessities, rather than to become parts of a well considered whole.

This with a few notable exceptions has marked the growth of the small colleges into great universities, for it must be remembered that fifty years ago all our universities were small colleges. It is still true today of many of our seats of learning, although it is becoming more and more evident to the Trustees of these institutions that adaptability to site and natural conditions, orientation of groups and buildings to give the maximum of light and air, convenience of access and ease of intercommunication, traffic problems, correlation of interdependent departments as well as unity and harmony in design are all essential elements in the problems of housing and teaching large numbers of men and women.

It is unquestionably true that an orderly and systematic distribution of units, based upon a serious study of all the present conditions and future possibilities, conduces not only to economy, ease of administration, beauty of surroundings, health and happiness, but also to that calm and serious atmosphere so necessary to the academic mind. The application of these principles is much more simple in the case of the small college. If the great university has gone too far in its rapid and ever widening scope, it is not too late for the small college, particularly if it has adopted what may be called an ideal student body unit, to proceed with an architectural plan conceived by one man with one coherent set of ideas.

Trinity College at Hartford, Connecticut, is working out such a scheme.

The conditions for its realization are ideal. Possessed of a splendid site, ample room, a magnificent view in every direction, it already has an existing group of well designed and well built buildings, Gothic in style, and perfectly adaptable to the enlargement necessary for modern requirements.

It is now proposed strictly to limit the number of students and to fashion the whole educational plan to this limited number. In a community limited to five hundred students, not only can the chapel, the dormitories, the library, the refectory, the assembly halls, the lecture and recitation rooms, the gymnasium, and the athletic fields be proportioned properly and adequately to the required numbers, but the whole institution can be planned and designed as one harmonious whole.

THE NEW BOSTON COLLEGE*

Ralph Adams Cram Describes Its Present Architectural Beauty and Its Satisfactory Progress

FOR some years everyone who has seen the beginning of the new Boston College has realized that something was happening that was immensely significant. The extraordinary beauty of the site and the striking qualities of the architecture make a combination that not only gives immediate satisfaction to the eye, but stimulates the imagination as to the future. Certainly, here is a scheme under way which promises to work out into one of the greatest artistic features of Massachusetts, even of the United States. Higher education demands, and has by no means always received of late, the finest possible architectural embodiment, for the silent influence of good art is perhaps quite as potent along educational and cultural lines as is the scheme of studies and the discipline involved. When this higher education is knit up with religion, the demand becomes even more insistent, and when, by chance, this religion is the ancient Catholic faith of the world, then indeed we have not only the greatest possible opportunity but the most imperative demand for the best that men of today can provide.

Every architect knows, and I should say every layman as well, that in this particular case the institution itself and the architects are meeting the evident necessity in the most appreciative, intelligent and brilliant fashion. The great tower has been a landmark and a joy to the eye ever since it was erected. The faculty building began to indicate future possibilities, and now the designs that have been made by Maginnis & Walsh for the chapel, the library, the science building and the gymnasium go still further in their stimulating promise. Usually one gets in American colleges one, or perhaps two, structures conceived in the right spirit, worked out in logical style and admirable design mixed up with heterogeneous edifices of very varied value. Occasionally, as for example at Princeton, this number is increased to a preponderant majority. Seldom, however, does the opportunity offer itself for a complete and consistent group of all the educational buildings, planned by one hand and forming a consistent whole. Boston College is one of the exceptions, and from every possible point of view the general public must look with interest on the working out of the project, at the same time giving it every possible support, financial and otherwise. There are no limits that can be set to the cultural and civilizing value of such a power as this.

It is interesting to see in how masterly a fashion the architects are dealing with each element of the problem. There is sufficient variety, explicit and effective differentiation between the nature of the several buildings, and yet it all hangs together with notable consistency. There is no feature or factor in any educational institution which is of greater value, and is more often neglected or altogether abandoned than the chapel, because we have pretty well learned by this time that there is no effective education that is not interpenetrated by religion at every point. The position and the design of the proposed chapel for Boston College fortify this principle. The scheme itself is of the simplest, and, therefore, of the best, a chapel that is a chapel, and neither a miniature cathedral, a parish church or a more or less spiritualized bungalow. The whole scheme is fine, simple, straightforward and dominating.

Altogether, the profession of architecture must feel it is already heavily in the debt of Boston College and its architects. How deeply in their debt must be the general public is a thing that will be perhaps more clearly recognized as the great scheme is worked out to its conclusion. Certainly, after a precedent such as this, there is no excuse for organized education or organized religion to revert to the bad old ways of cheap, ugly and ignominious architecture. A standard is set here toward which all energies in the future should be bent with the idea of approximation, even if not of emulation.

* Reprinted in part from Mr. Cram's article in a recent issue of the *Boston Transcript*.

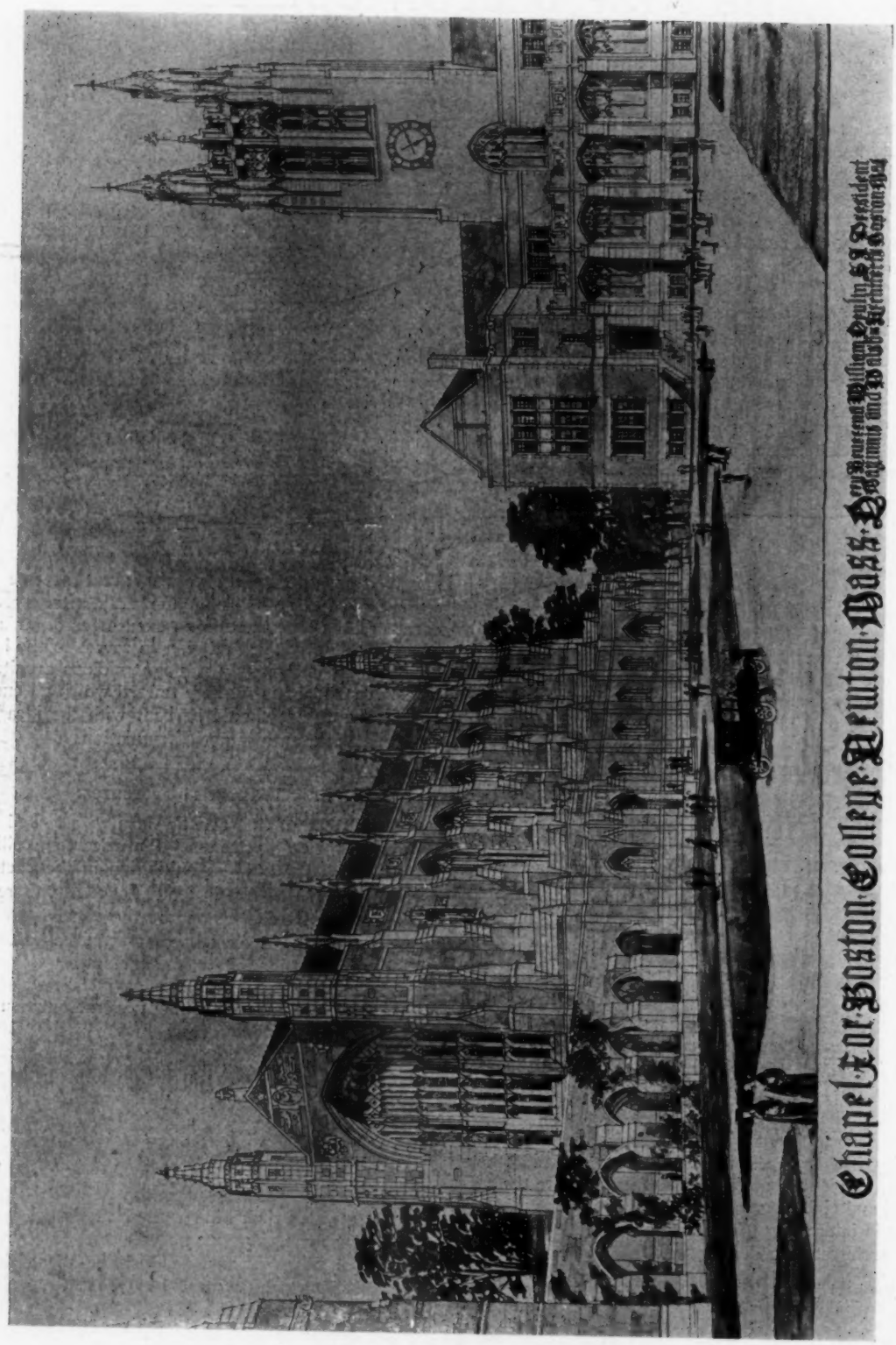
Italy Wants Art Treasures

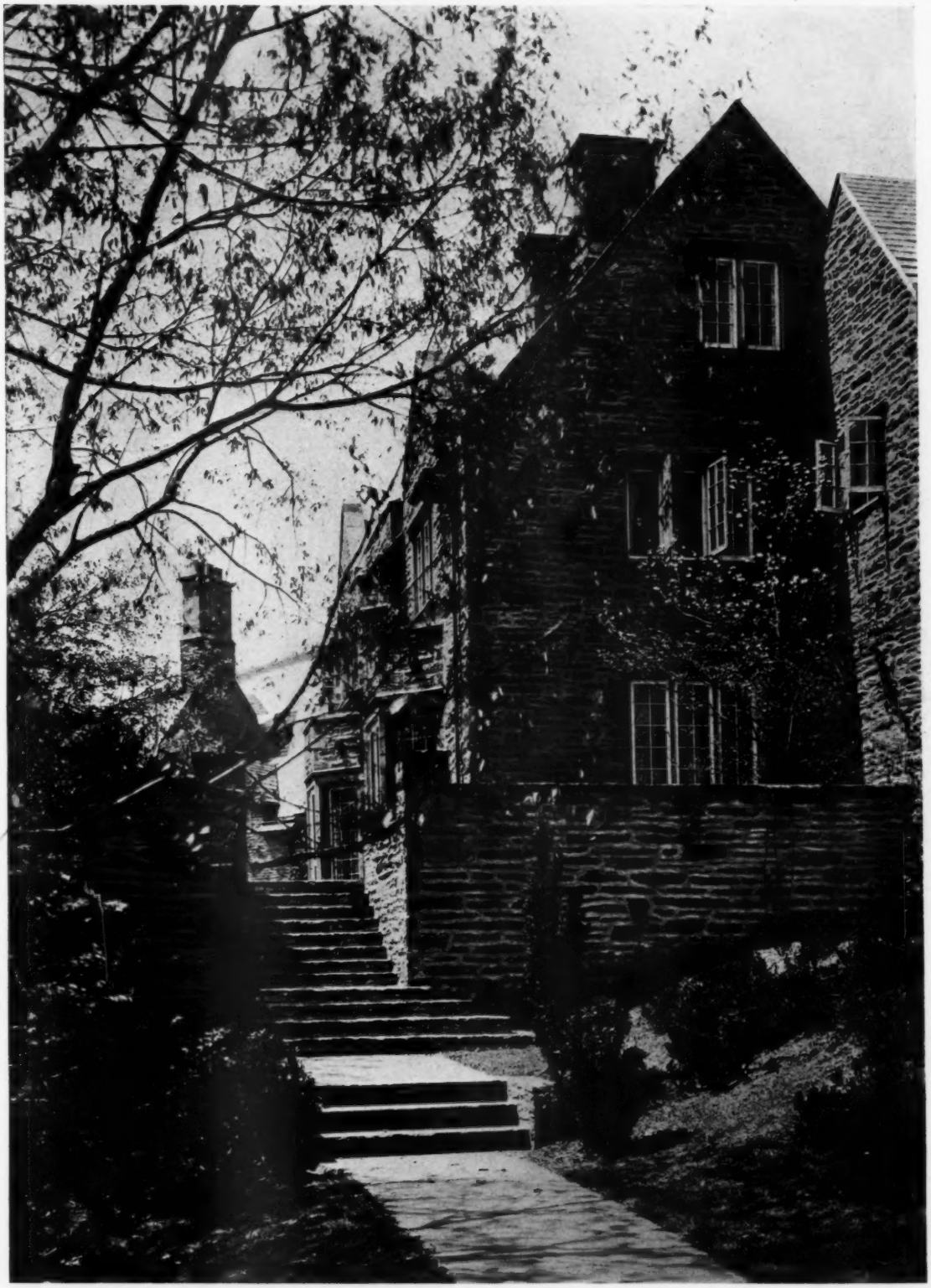
ASIDE from the artistic beauty attached to twenty-two priceless Pinturicchio ceiling panels which are now on exhibition in the Metropolitan Museum of Art in New York City, there is added interest in the history of the panels.

There is also an element of romance connected with the current exhibition, for the Italian Government is keenly desirous of learning just how and in what mysterious manner some of its most treasured works of art disappeared from the Palazzo del Magnifico in 1902. And the Italian Government wants those art treasures back in their old resting places and is willing to pay for them.

It was about 1508 that Pandolfo Petrucci, il Magnifico, or tyrant of Siena, commissioned Pinturicchio to paint and decorate a ceiling in the reception hall of the Palazzo. These panels are described as the choicest gems of their kind in the Renaissance art.

In some mysterious manner these ceiling panels found their way to France and were purchased from a responsible art dealer in 1914.


Chapel for Boston College Newton Mass
Ralph Adams Cram Architect
Boston



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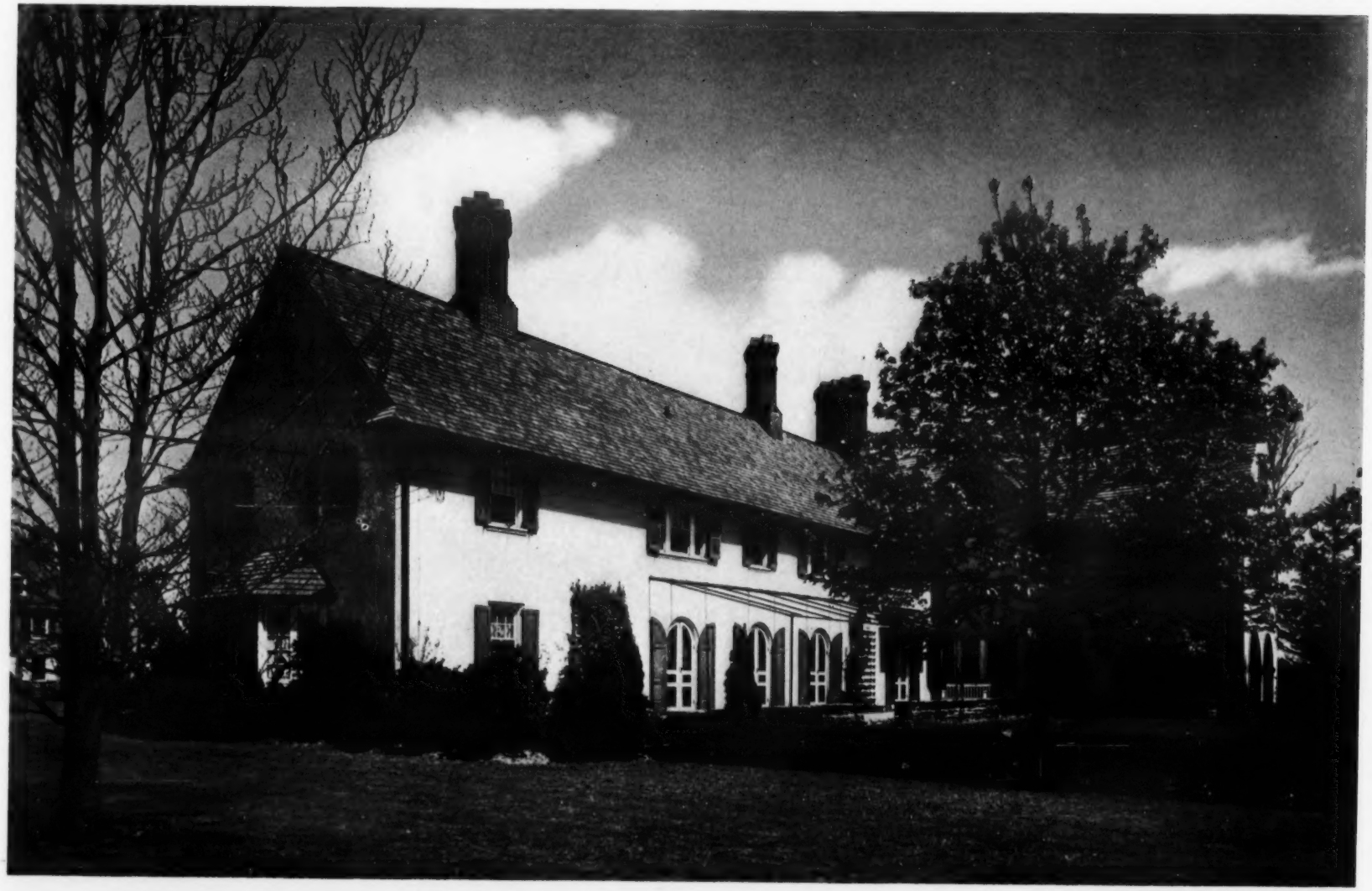
ROBERT R. McGOODWIN, *ARCHITECT*



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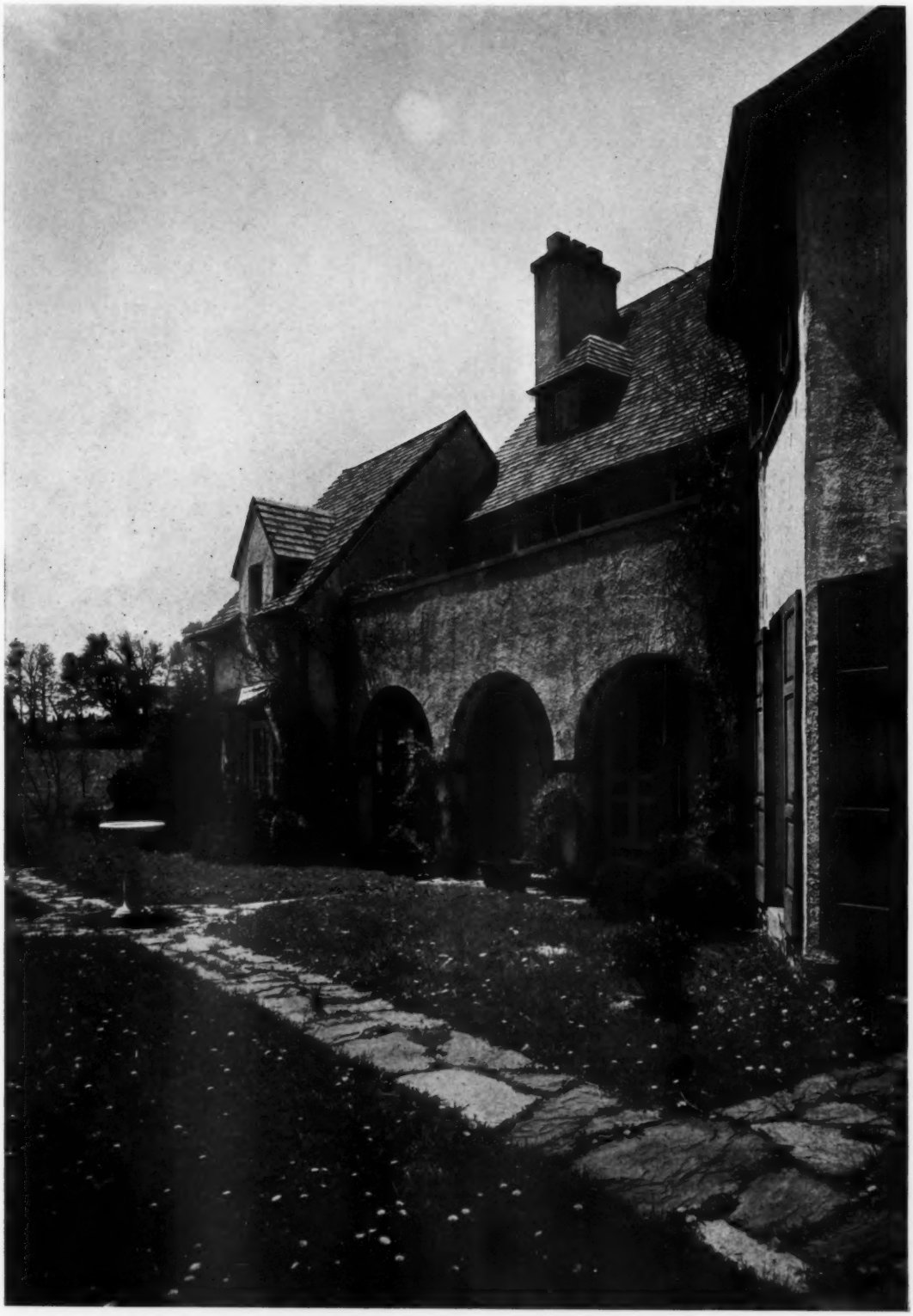

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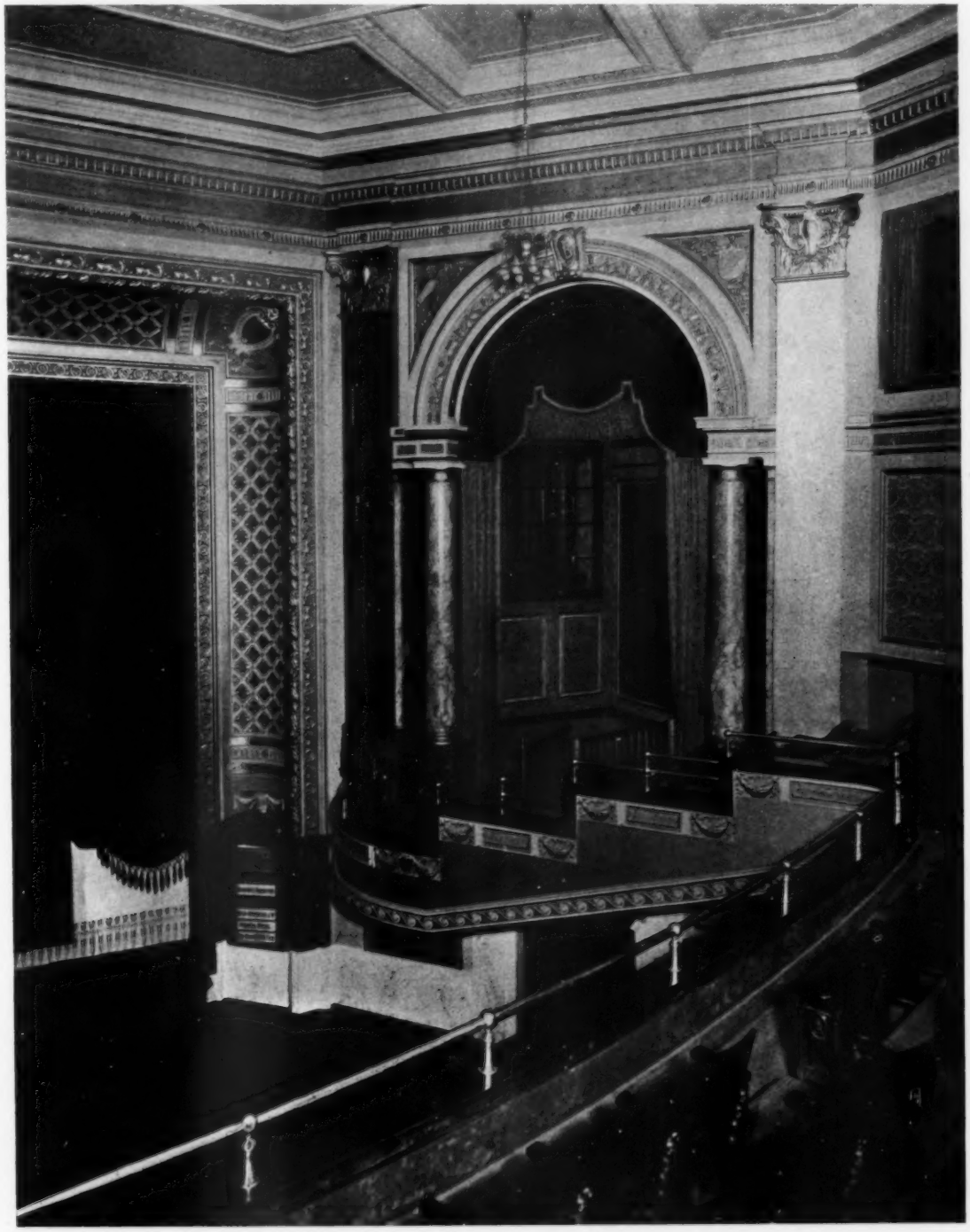
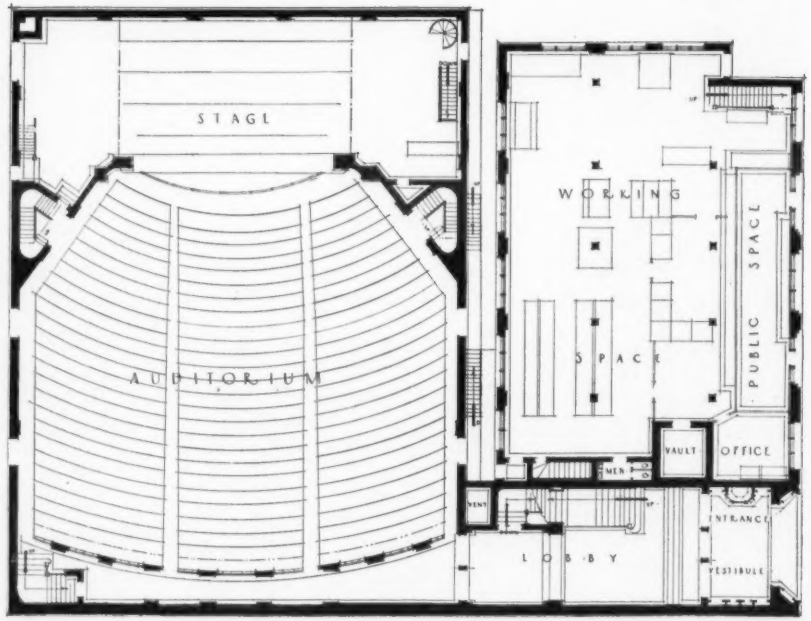
BROADWAY THEATRE, SOUTH BOSTON, MASS.
BLACKALL, CLAPP & WHITTEMORE, *ARCHITECTS*



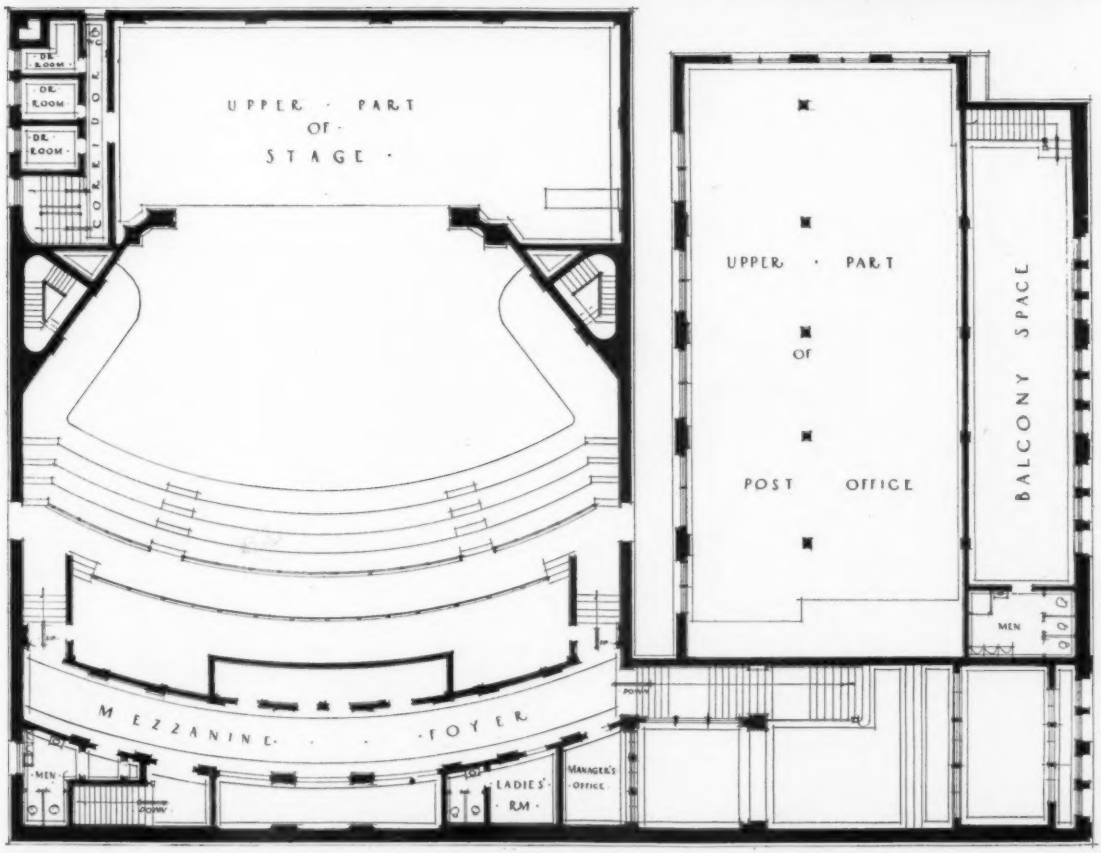
BROADWAY THEATRE, SOUTH BOSTON, MASS.
BLACKALL, CLAPP & WHITTEMORE, *ARCHITECTS*



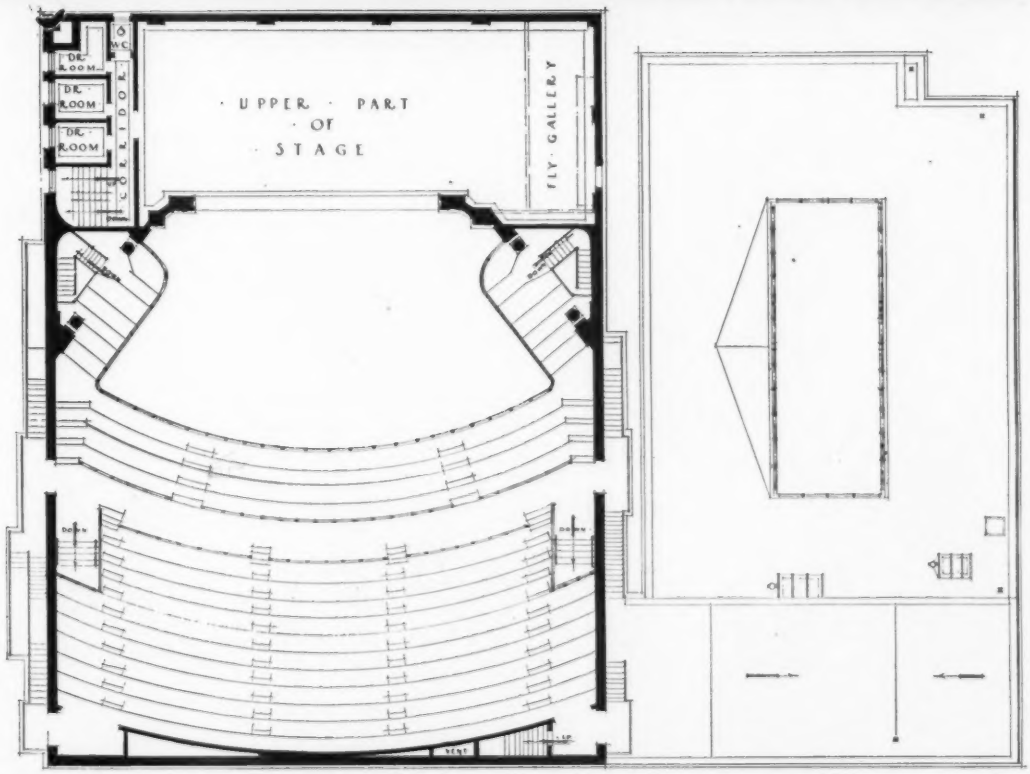
VIEW IN LOBBY AND MAIN FLOOR PLAN

BROADWAY THEATRE, SOUTH BOSTON, MASS.

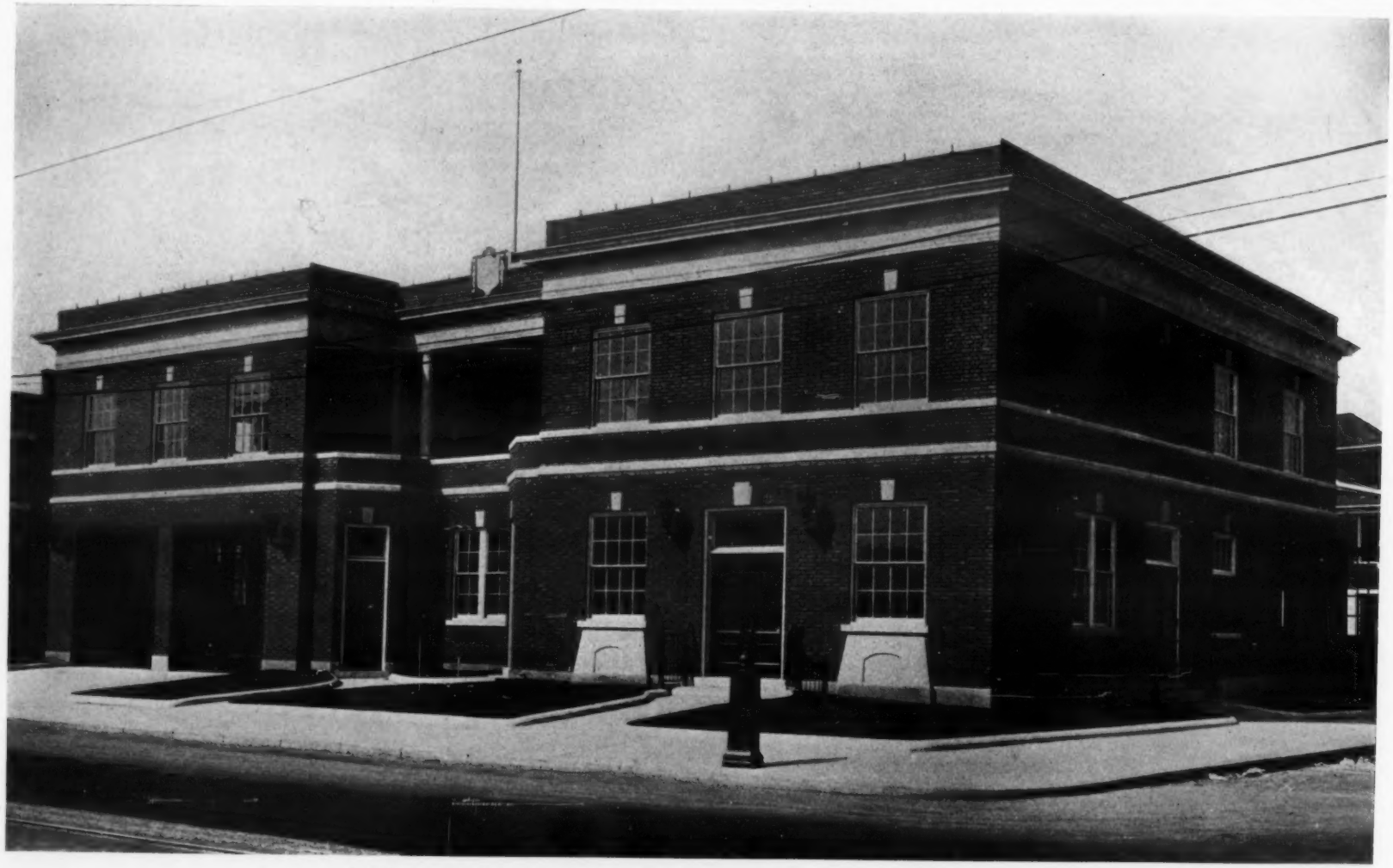
BLACKALL, CLAPP & WHITTEMORE, *ARCHITECTS*



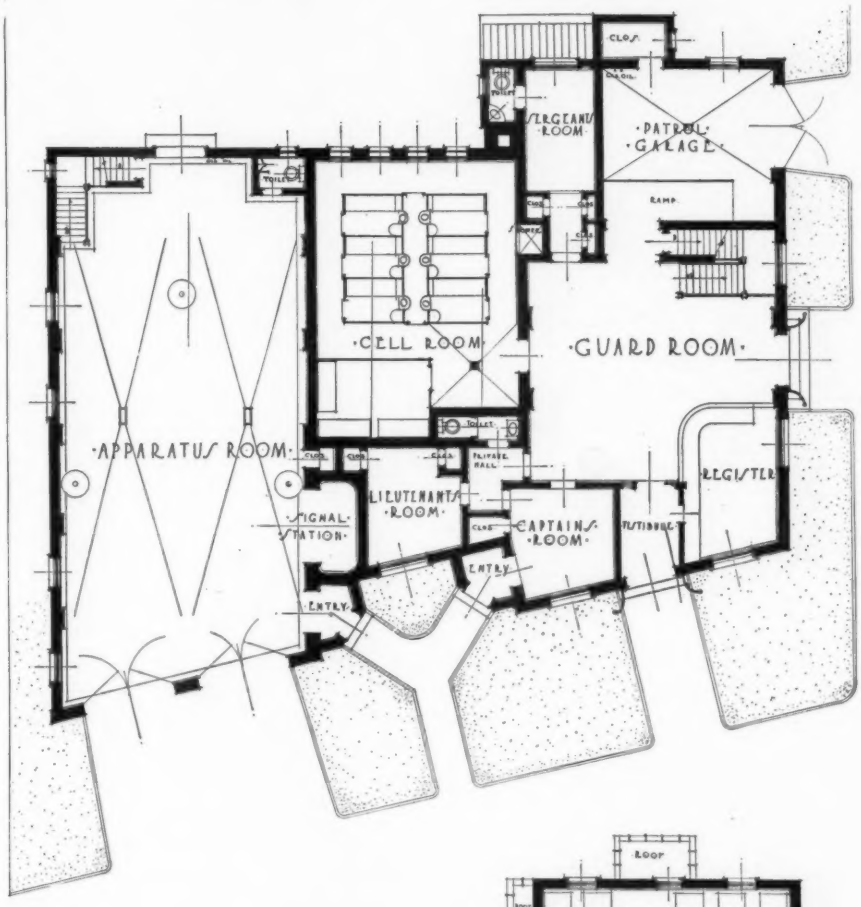
VIEW OF MEZZANINE FOYER AND PLAN OF MEZZANINE FLOOR
BROADWAY THEATRE, SOUTH BOSTON, MASS.
BLACKALL, CLAPP & WHITTEMORE, *ARCHITECTS*



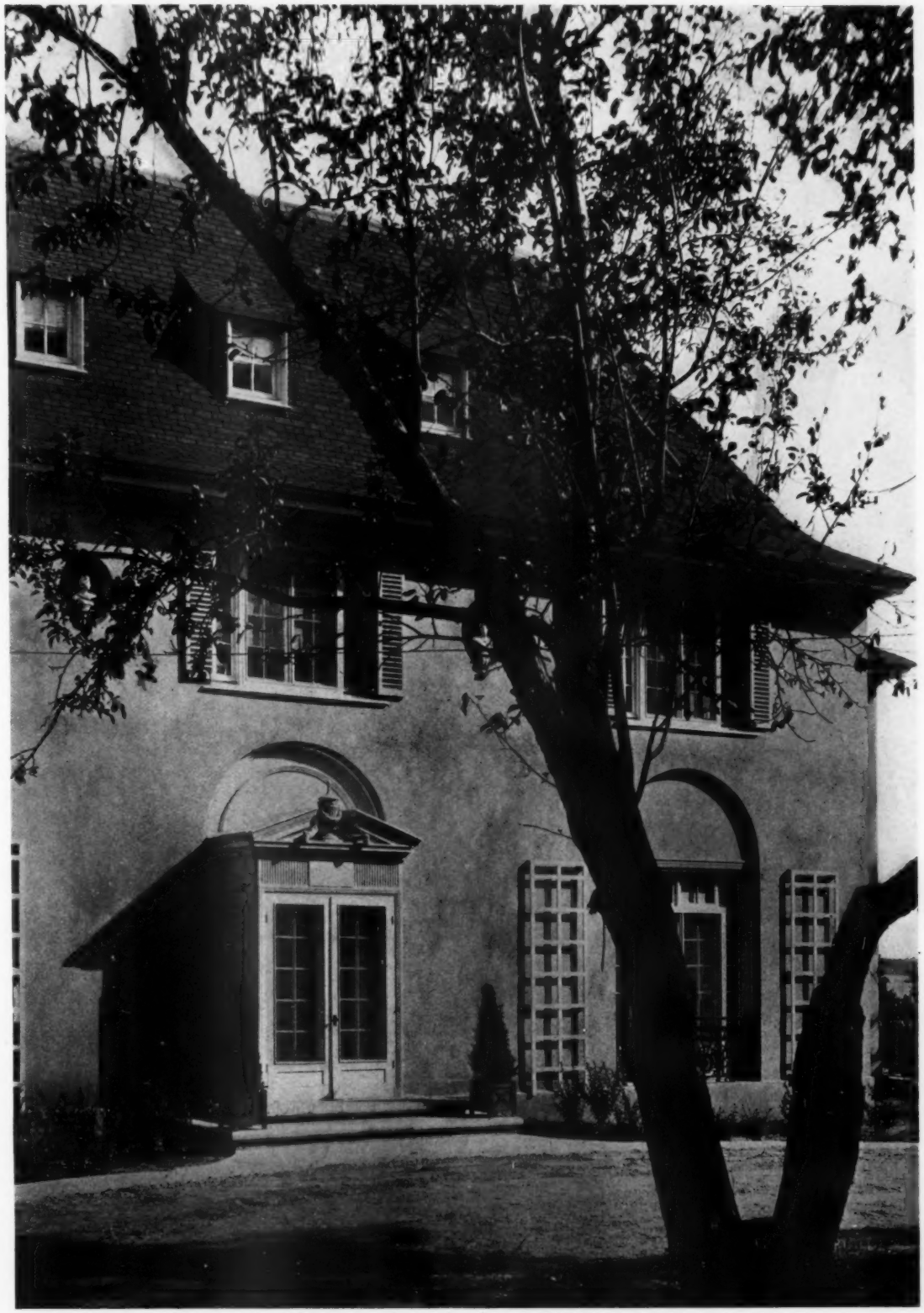
VIEW LOOKING ACROSS BALCONY AND BALCONY FLOOR PLAN
BROADWAY THEATRE, SOUTH BOSTON, MASS.
BLACKALL, CLAPP & WHITTEMORE, *ARCHITECTS*



FIRE AND POLICE STATION FOR THE CITY OF BRIDGEPORT, CONN.
LEONARD ASHEIM, *ARCHITECT*



FIRE AND POLICE STATION FOR THE CITY OF BRIDGEPORT, CONN.
LEONARD ASHEIM, *ARCHITECT*



HOUSE OF G. S. GAYLORD, NEENAH, WIS.
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Planning High Buildings

(*Continued from page 608*)

shows the new and the old building. This illustrates the present height to which buildings on 42nd street are permitted to go. I would like to call attention to the treatment of the side wall, which the architects of this building were good enough to carry out in harmony with the scheme of that building. Under normal conditions those blank walls would be left just of plain brick with scattered openings. This new law has done more to call the attention of architects to the fact that there is something besides a front in connection with a building than anything that has happened in recent years. The fact that they get these set-backs, that they have to look at the upper stories of their buildings, has resulted in their studying those things from every angle, making their buildings appear right from the front and from the side and from the top. I think that the airplane view is just as architecturally important in the future, as any other view has been, and I believe the time has passed when we can design buildings as a flat sheet of paper facing a street. From now on we must look at our buildings from every possible angle.

THE DISCUSSION

Mr. Gray: I would like to suggest that while these examples are conspicuously applicable, the same principles are equally applicable to similar places, and there is a general movement on foot, from one side of the country to the other, to get zoning laws in operation. It is really a simple procedure, because of the fact that it calls for a very small appropriation. It is a matter of legislation, calling for a survey and preparation of maps. That work has been done to an extent, now, so that the method is getting fairly well standardized and can be done fairly rapidly so results can be gotten quickly.

The increase in valuation of properties resulting from these protective measures is marked. Legally they are restrictions, but as a matter of fact they are protective measures to prevent individual properties from being ruined by undesirable structures on adjoining properties. From the fact that they do increase land value, and consequently taxes, a problem is presented. It is a very simple thing to get established in any community, as is evident by the fact that there are today, I think, about 29 cities and towns in the country which have zoning ordinances. It is desirable to proceed by getting a State Enabling Act. In all states that is not necessary; where the cities have proper powers this is all done under the police power of the states delegated to the cities. It has been thoroughly sifted out in all the courts, so that there is no question about legality, and there are no condemnation proceedings in connection with the method.

Mr. Hammond, of Illinois: Mr. Corbett spoke of the Bush Terminal Building, as the first building built under the old zoning law, which was shown on a slide, and the other under the new law. Merely for information I would like to ask Mr. Corbett just what is the general difference between those two laws. Has the old law been amended recently?

Mr. Corbett: There was no law regarding the height of buildings until this present law, which I have just described, went into effect. The old law allowed the buildings to go as high as the architect wanted to carry them; or, as high as his clients would let him carry them, which is more to the point. The only restriction was one as to materials.

Mr. Hammond: So that the set-backs, in the case of the Bush Building, were not required?

Mr. Corbett: No.

Mr. Hammond: That building was planned with those set-backs, and I thought there might have been that reason for it.

Mr. Shaw, of Illinois: I should like to ask if there is any protection for the neighbor on the inside lots? He seems to think of his neighbor on the other side of the street, but no protection seems to be given on the inside line.

Mr. Corbett: There is no restriction on the lot lines. The idea of the law was simply to get light and air into the street. There is a restriction on the rear yard. The set-back would have to follow a somewhat similar line. It is not quite the same. But there is a restriction on the rear yard which would make a building come to a pyramid at the top if it were carried to its maximum point. Of course, as I explained, the building on 25 per cent of the area of the lot can go to any height.

Mr. Baird, of New York: I would like to ask Mr. Corbett to explain how it is that on a perfectly flat party wall he gets the appearance of texture, light, and shade. That is the interesting side of the Bush Terminal Building.

Mr. Corbett: In that particular building the side walls were more conspicuous than the front, and it seemed to me that it was an opportunity to demonstrate the possibilities of treatment of a side wall.

The way that I secured the particular result there was by making a design of the building as I would like to build it if it had been standing free. Then I make a rendering of that design with shadows definitely cast at 45 degrees, with high lights and shadows. Then I interpreted that rendering in flat brickwork by the use of dark brick, light brick, and the brick tones of the building itself. That gave us a similar treatment on all faces of the building which did not take an inch of room that would not have been taken in the normal, ordinary type of

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building, and the cost of laying the brick in that particular form was really negligible, viewed in the enhanced appearance given to the building.

Mr. Holtzman, of Illinois: Mr. Chairman, in this connection I would like to make a suggestion that the architects throughout the country take upon themselves the initiative in getting zoning laws established in their communities. In most of the states it will doubtless require an Enabling Act from the State Legislature to permit the cities to pass zoning laws that will stand the tests of the courts.

The reason that I speak of this is because of the extended experience we have had in Chicago with an effort to get a law so that the city of Chicago could be zoned. About two years ago the City Council began the formulation of an Enabling Act to present to the Legislature, and the committee charged with the duty asked the Women's Club, the City Club, and one or two other clubs of Chicago, to come and help. I happened to be sent by the City Club to this meeting, and during the discussion it was perfectly evident that no one there knew anything about what they were trying to do. Towards the end of the meeting I suggested to the chairman of the meeting, whom I happened to know personally, that there were two bodies of experts in the city that knew something about planning, and that this matter of zoning was probably largely a matter of planning a city within the old city already in existence. I mentioned the Western Society of Engineers and the Illinois Chapter of the American Institute of Architects, who I thought would be perfectly willing to help; and he confessed that it never occurred to anybody to think of engineers or architects in connection with this business.

We have gotten busy, however; the situation is now changed and they have even asked us to come, after two or three years' experience with them, to discuss with them financial matters. I speak of this because I am sure that the architects in other parts of the country can take a very practical and a very desirable lead, from the point of view of the public welfare and the public good; especially along the line of this matter of zoning.

Mr. Fenner: May I say one further word, seconding all that Mr. Holtzman and Mr. Gray have said as to the importance of the results?

Also I would like to say, as a member of the Commission which studied the problem in New York for three years, leading up to the passage of the law, that I would not like to have this meeting get the impression that the law, with its results as reflected on the screen, is in any way an ideal law. The heights permitted are far too great to be ideal. We had to meet as well as possible a condition which existed. I want to say that for the benefit of any of the smaller cities which may now be discussing zoning and height restrictions. Do not permit your restrictions to allow what had happened in New York before we passed our zoning law.

Mr. Malcomson, of the Michigan Chapter: I would say that in connection with the zoning law passed at Lansing, at Detroit, and in working with that in the last few years, we have been confronted with one condition. The center of our city has a great many tracts of ground that are not built up. In trying to get the property holders of these particular lots to assist us in the zoning movement, we found that they were forced, in many cases, to build 32 and 33 stories to obtain sufficient height so as to get sufficient rental to make it profitable to build. We found in several cases, when we went to that height, that we had to sacrifice so much space for elevators and exits that we lost more space than we gained. The problem to solve was this: The builder who had one of these lots with a three or four story building on it, with a long life of usefulness, would be taxed so much that it would cost him $30,000 a year from his income. He had to go up to thirty stories to get the income, and in going up would destroy the light and air of some of the earlier buildings that had been put up. That created the condition that the owners of these lots who had small buildings were strongly against passing a zoning ordinance unless their taxes and land values were reduced. That is a question I wish Mr. Corbett would tell us how we can deal with by getting some sort of an Enabling Act so that the taxes would be reduced. In some places we are in very bad shape.

Mr. Corbett: In New York, where the property values are such that it would have been manifestly unfair to limit the height of buildings reasonably, the zoning commission permits a height of 2½ times the width of the street. Now, that may not be up to the point of bringing the returns with it that it should, but it seems to me that under conditions of that kind, zoning a city so that real property values are very high, you may allow an extra height. If that does not meet the situation it seems to me that the city might relieve the owners from taxation in those particular sections. I do not see any other possibility.

A delegate from the Michigan Chapter: Woodward avenue, our main thoroughfare, is 150 feet wide. We set out to allow 100 feet in height, and after taking it up with the property owners, they wanted 250 feet. I am afraid that unless the valuation and taxes are reduced, they must have about 300 feet in order to allow them to get any return.

Mr. Corbett: You see, this law as we have it in New York does not restrict the height to 250 feet. That is only the front wall of the building. Then we go up at a line drawn from the center of the street. That permits a great many stories.

Delegate from the Michigan Chapter: That would work very nicely in other places but Detroit, as it happens, is laid out with many lots 30 feet wide and 250 feet deep.

Mr. Corbett: Then I would suggest to your prop-

erty owners that they unite and throw several of these properties together.

Mr. Gray: I think one of the interesting features of this zoning ordinance is that it is doing the same thing that cooperative housing is doing. It tends to induce people to think in terms of larger units. As Mr. Corbett has stated, that is the only way out. They have got to throw their parcels together and think in terms of larger units, which we all recognize is a very desirable thing.

One more statement I would like to make. In Connecticut we have before the Legislature at the present time a State Enabling Act which was drawn up with very great care in conjunction with the best advice that could be had from people who have had experience with zoning in the various cities all over the country. We have consulted all the people who have actually been working with the law, the architects and the lawyers, and we have a draft which the people in New York, who have had most experience and who have been advising other people over the country, say is the best state act which has yet been produced. I would suggest to Chapters wishing to start a zoning movement in their state, that if they will write to the New Haven Chamber of Commerce for a copy of that act on state zoning, they will undoubtedly receive it, with a brief describing the action of the law.

Mr. Coolidge, of Boston: Mr. Fenner's remark that the New York law was not all that they would like it to be, but was perhaps the best they could get, moves me to point out that one of the dangers in legislation about zoning is that of overlooking the street capacity to which the legislation should apply. I trust Mr. Fenner will correct me if I am mistaken, but I feel pretty sure that in designing the lower limits of height for New York, he had in mind the danger of overtaxing the street capacity, even of New York.

In Boston, where we have long had a limit of 125 feet, or the utmost of 2½ times the width of a street for streets less than 50 feet wide, we are quite convinced that if our downtown sections today were solidly built up to the height that the law allows, our street capacity would be entirely inadequate to take care of the traffic thereby created. In other cities I have noticed that with the great increase in parking space required or desired for automobiles, the street capacity is actually less than it was when buildings were lower. Therefore, in dealing with the problem of zoning, I think it is quite important to establish some ratio between the amount of occupation per acre for buildings, especially in a business section, that is compatible with the area that is allowed for streets and sidewalks.

Mr. Litchfield, of New York: Before the appointment of the zoning committee in the City of New York there was a building commission which attempted to tackle the same problem, and they made a report to the Board of Aldermen setting forth a principle which, while it was not stated by the zoning committee, is really the basis of the legislation; and, as it is a principle which applies to all cities, it may be worth while for me to state it. That building code commission stated that instead of setting a flat limit of height, which was the advanced legislation suggested at that time, that the proper procedure was to set a limit of volume; and really, that is the thing for all zoning commissions to bear in mind, that they should determine the volume of the building permitted to grow upon a lot in any section. In other words, the law as prepared by that commission said

FIG. 10. FRONT VIEW OF WURLITZER AND BUSH BUILDINGS, WEST FORTY-SECOND STREET, NEW YORK

that there should be no building built in certain sections of New York the volume of which should be more than 174 times the area of the lot.

You can see how that principle works. There is no objection to height of buildings, per se. The objection to the high building has been that it has robbed the light from the street and from its neighbors, and has overtaxed the street's transportation and sewer facilities, so that, if the principle be borne in mind that for a certain section one factor is appropriate and for some more densely populated sections another factor is appropriate, it will be more practicable to work out your ideal law.

AN IMPRESSION of the WASHINGTON CONVENTION

Mr. Howard Van Doren Shaw, of Chicago, Reports as a Delegate to the Recent Washington Convention

YOUR delegation filled about six per cent. of the chairs in the Convention; but we occupied about fifty per cent. of the floor. I say "we"; but figuratively I only held the coats of the gladiators when they went to it. I fear I am a hopeless failure as a delegate. I never changed a by-law in my life. In fact, I did not know anybody ever read constitutions, canons and by-laws—I thought of them as one does of foundations which one cannot see but hopes are there. And yet it seems the greater part of three days is spent in the exciting business "of striking out that part of section 122, paragraph 3, after the words, 'client' and inserting, etc., etc.," Most of the changes are prefaced "for the protection of the client or public." I suppose this bunk is due to the proximity of the convention hall to our National Congress.

The canons themselves seem to be for the encouragement of honesty among the architects. If a dissatisfied owner wants to get rid of an architect, or an unprincipled confrere tries to get a job away from you, Canons of ethics are not likely to help you. You will need a sawed-off shot gun. You cannot legislate a gentleman. It reminds one of the alchemists of old who spent their lives trying by weird incantations to turn the baser metals into gold.

Personally I like to think of the Institute as a time-honored old guild of which Ictinus, Bramante, Brunelleschi, Christopher Wren, Bulfinch, and many other masters are among the early members, and where today, one meets the men who are making this a better looking world and discusses architecture, *not* by-laws. I would like to have the canons graved on old lichen-covered marble. They could be very brief, about like this: "Be a gentleman, if you can; but for God's sake be an architect." Time and nature dignify any creed, just as they do any structure; but nowadays we cannot let constitutions alone; Vide the 18th Amendment. Randolph Coolidge made a long address, telling what a marvelously perfect document the Institute's Competition Code was and he proposed adding a Boston bay window on this Parthenon. I was born a blue Presbyterian; you know this church hasn't much ecclesiastical setting and a few years ago, some progressive pillars of the church decided they could not stand for "infant damnation," so they coolly changed the creed, the only thing about the church that dated back of the last cranberry crop! And I'll bet the little infants laughed in their sleeves! You may not believe Jonah's early trip in the submarine; but surely you would not cut this quaint bit of decoration out of the King James Version.

Had Michael Angelo and Palladio and the rest of them spent their time worrying over a minimum charge, where would the Renaissance have come in? Athens could well have paid Ictinus 100 per cent. commission for the Parthenon. It is about the only thing which has kept modern Greece from sliding off the map.

There are notable architects at these conventions (there would be more if you would emphasize architecture and corral this business), men whose work will go down in history. Why not let them talk of their art and leave the business end to the Board of Directors? Think of a walk about London with Christopher Wren, pointing out his many towers and telling his hopes and dreams of others.

In Washington we might go over the superb Lincoln Memorial with Henry Bacon, The Freer Gallery with Charles Platt, the new Treasury with Gilbert, or the Hitt House with Pope. Klaudee's talk and plans of college yards; Howe's fascinating views and clear drawn plans of French Farms were the only efforts in this line at this meeting, and are, I understand a new departure.

The exhibition of contemporary work at the recent conventions is a splendid move in the right direction.

Possibly a drastic reduction in the size of the delegations would expedite business; but there should be a corresponding encouragement to members to attend for the inspiration of meeting fellow architects and seeing their work, would mean real education. The allotted span of life of seventy years is not very long if the first twenty-five are spent getting ready and the last fifteen playing golf. It leaves only about thirty years to help make this a better looking world than we found it. Let us not spend it changing by-laws.

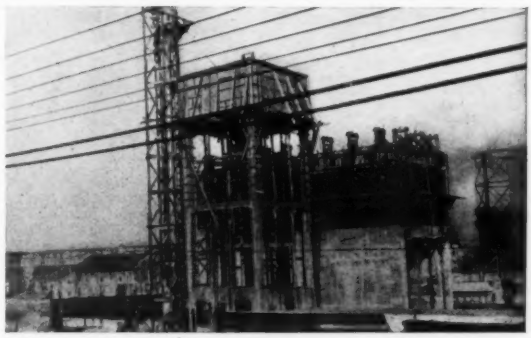
To all of which the editors of THE AMERICAN ARCHITECT add a fervent "Amen."

DEPARTMENT OF ARCHITECTURAL ENGINEERING

A CONCRETE COAL BIN of UNUSUAL DESIGN and CONSTRUCTION

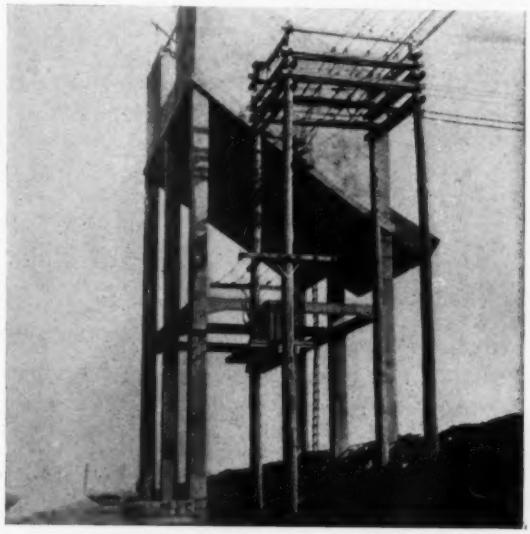
THE uncertain elements that enter into the construction of engineering works must be considered when the designs are made. Engineers realize the limits of their control over the actual work in the field and for that reason they often refrain from designing in unusual ways, especially when high stresses are involved. This does not apply as much to designing in structural steel as it does to designing in reinforced concrete. The manufacturing of the steel and its fabrication are done in the shop under the best conditions and its erection in the field is easily inspected. In the construction of reinforced concrete work, while the design may be perfect and the materials of the right quality, the making of the forms, the placing of the steel and the mixing and placing of the concrete are all field work done largely by unskilled men. When all of these points are taken into consideration, it will be apparent why the coal bin here described and illustrated is considered to be of "unusual design." This coal bin and the other concrete structures were built for the St. Louis Coke and Chemical Company at Granite City, Ill. Mr. L. J. Mensch, M. Am. Soc. C. E., of Chicago, designed these structures and in addition was the contractor for their construction. Under these circumstances, he designed in a way that others might refrain from doing for reasons stated above. The undertaking, in design and construction, was successful.

COAL MIXING AND PULVERIZING PLANT, SHOWING STEEL LOADING TRESTLE

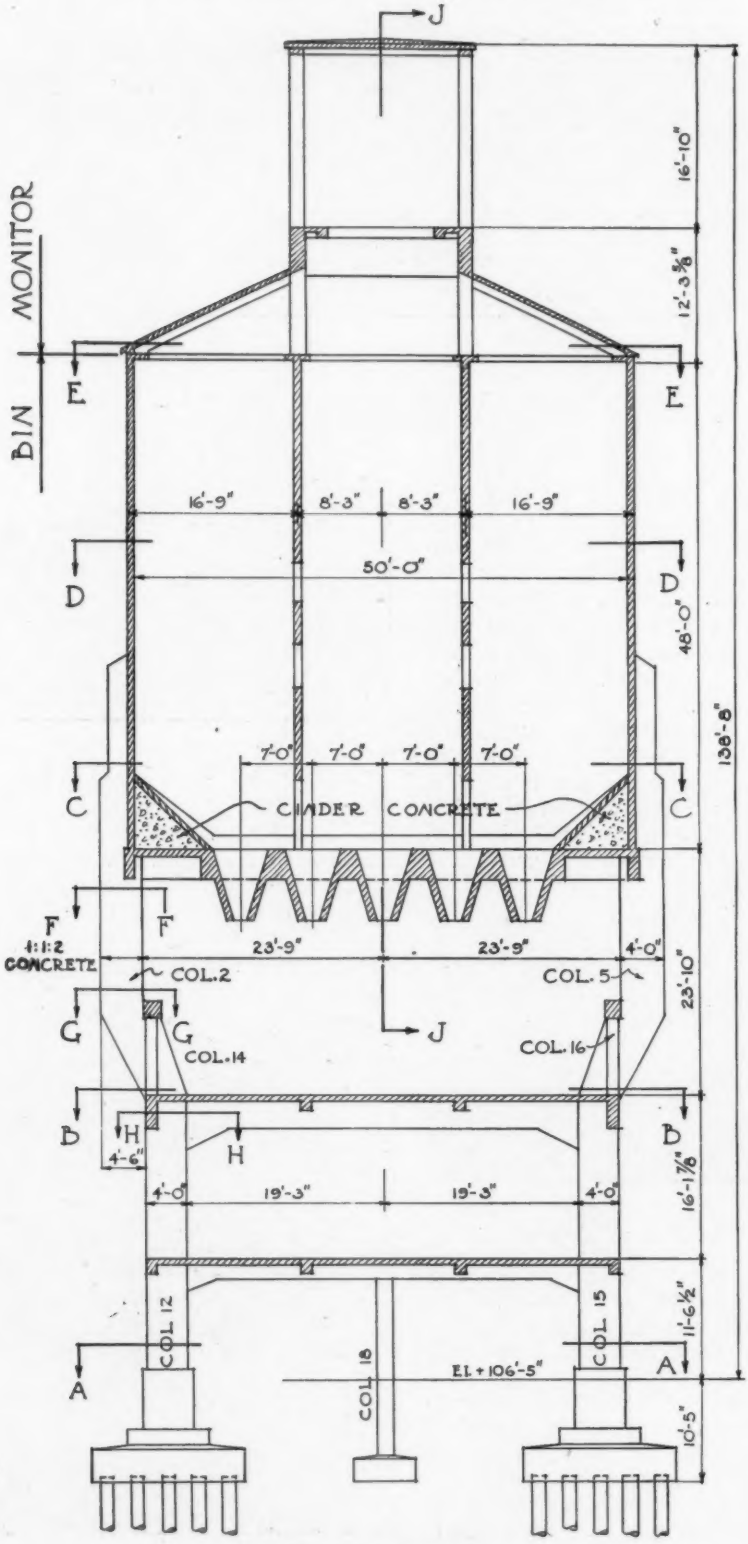


COKE QUENCHING PLANT DURING CONSTRUCTION

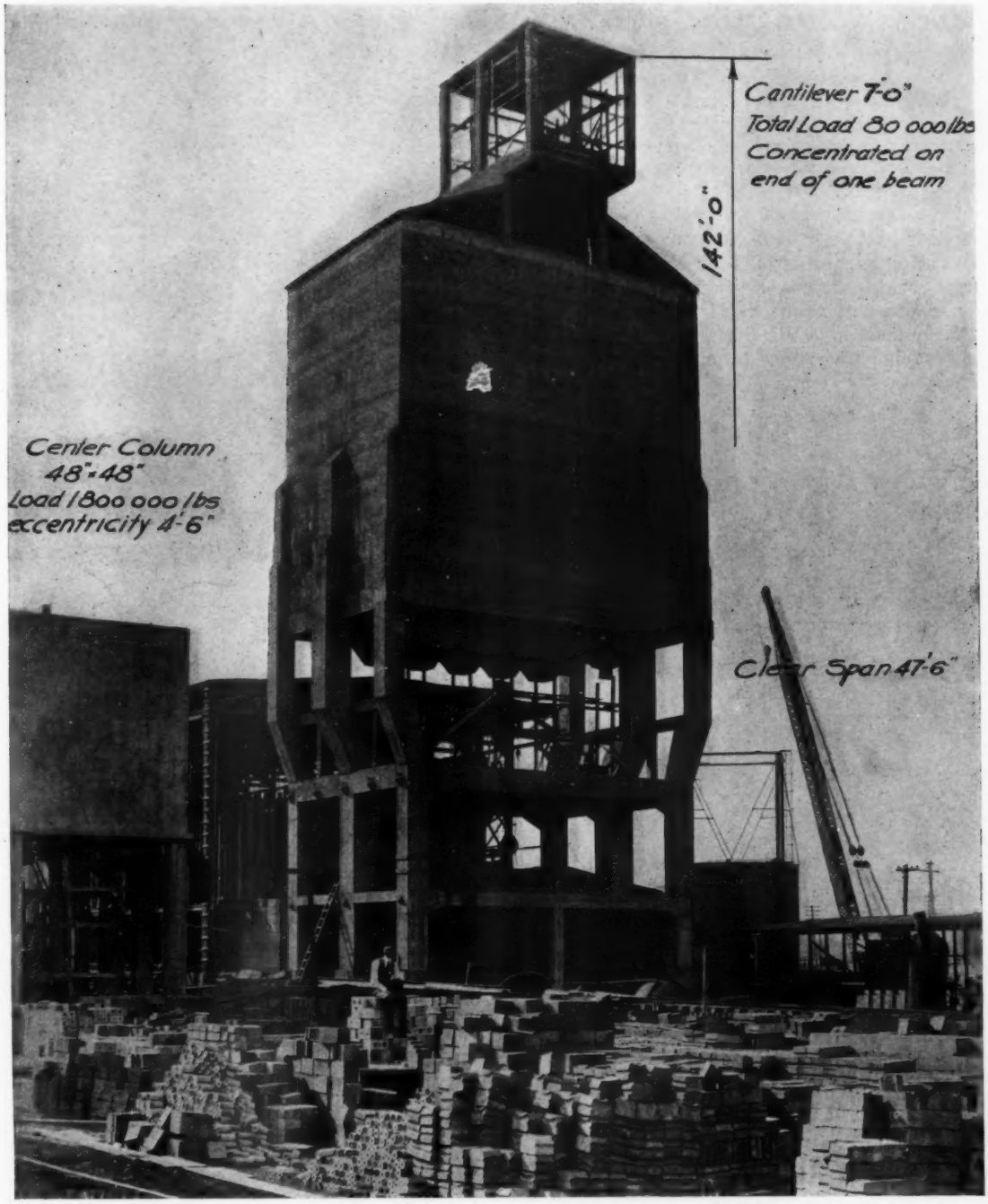
This coal bin serves to load the Lorry cars used



COKE LOADING PLANT



CROSS SECTION
SHOWING CENTER WALL BETWEEN BINS



COAL BIN FOR ST. LOUIS COKE & CHEMICAL CO., GRANITE CITY, ILL
L. J. MENSCH, *ENGINEER*

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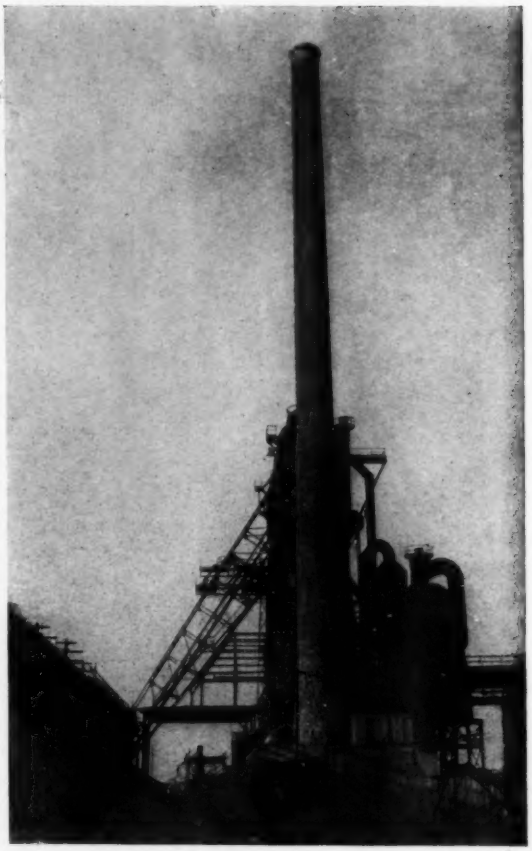
in charging the coke ovens. These cars are attached to a traveling crane and are loaded below openings in the bottom of the bin. The spacing of the Lorry cars and the charging openings in the ovens are such that the width of the bin is fixed and requires a clearance of 47 ft. 6 in. beneath it. The pushers used for removing the hot coke from the ovens must pass the bin at a lower elevation and require an overall width of 46 ft. 6 in. between the outside faces of the columns. For this reason the larger columns at the center of each side of the bin are offset 4 ft. 6 in.

The capacity of the bin is 1,900 tons of pulverized coal, which affords storage capacity for nearly four hours' use as the Lorry cars have a removal capacity of 500 tons per hour. The bin is charged through the monitor which adds quite materially to the total load.

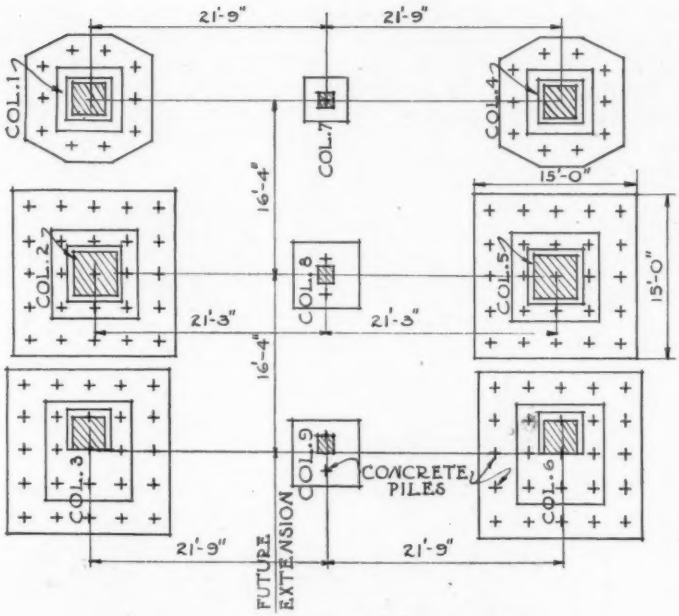
COAL MIXING AND PULVERIZING PLANT DURING CONSTRUCTION

The bin portion of the structure is 32 ft. 8 in. by 50 ft. in size and 48 ft. high. The bin is divided into six cells by partitions. Those partitions connecting opposite columns are designed as beams with flange at top and bottom as shown in Section J J, and thus serve to transmit the load to the columns. Two longitudinal partitions are provided at the third points in the span and serve to act as stiffeners to the transverse walls to prevent buckling and to tie in the outer walls. These partitions have a large opening at the bottom and four small openings above, which facilitate the flow of the pulverized coal to the outlets in the floor. This division of the bin serves to bring the moments of the horizontal pressures on the walls down to reasonable amounts so that light walls will have sufficient strength. As the greater part of the load is applied to the cross-walls near the bottom, vertical bars are provided to distribute the stress over the entire cross-section of the wall. These vertical rods diminish in size toward the top and are furnished in convenient lengths for handling. All rods are hooked on the ends and ample laps are provided at the splices.

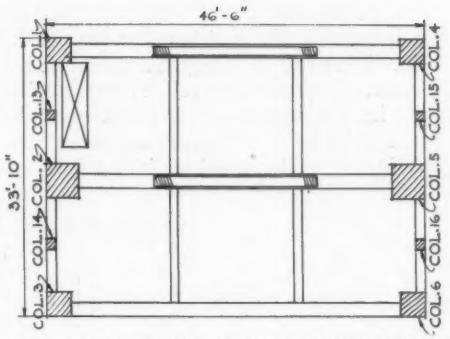


BLAST FURNACE CHIMNEY

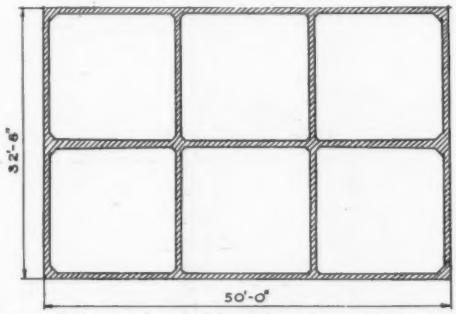
PIG IRON LOADING PLANT



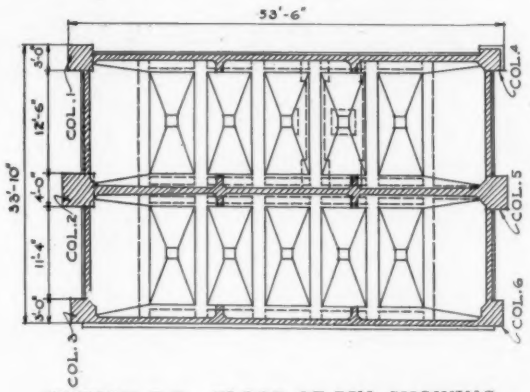
SECTION A-A. FOOTING PLAN



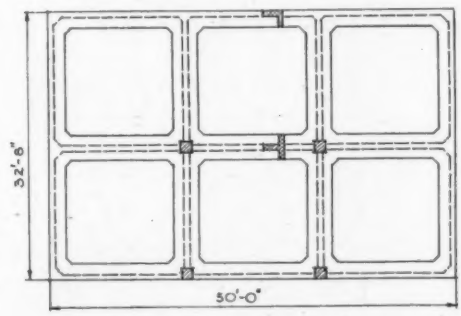
SECTION B-B. PLAN OF SECOND FLOOR



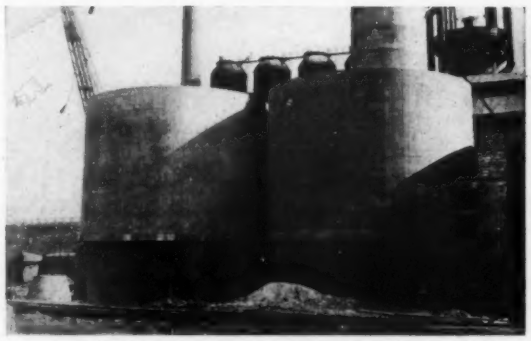
SECTION D-D. HORIZONTAL SECTION THROUGH BIN WALLS



SECTION G-G. FLOOR OF BIN, SHOWING HOPPERS

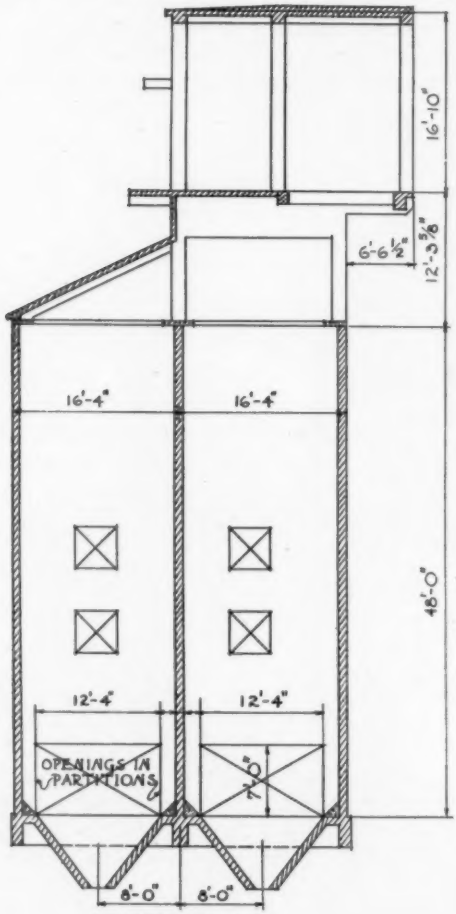


SECTION E-E. PLAN OF TOP OF BIN WALLS



WATER PURIFYING TANKS

The columns 2 and 5 support the maximum load of 1,800,000 lbs. and have an eccentricity of 4 ft. 6 in. They are 48 in. square and made of 1:1:2 concrete. The principal reinforcing consists of twenty ¼ in. square rods and a ⅝ in. round spiral having a 1½ in. pitch. On the tension side at the critical points, there is placed additional reinforcement consisting of ten 1¼ in. square rods. At the point of bend the compression side has two small additional spirals made of 5/16 in. round wire with 1½ in. pitch and placed in the corners outside the main spiral. The six columns on the sides of the bin extend up above the bottom of the bin about 20 ft. with the appearance of buttresses and thus take the



SECTION J-J
LONGITUDINAL SECTION

SECTION F-F | SECTION G-G | SECTION H-H

COKE QUENCHING PLANT

load transmitted through the deep cross-wall beams. The foundations for columns 3 and 6 are made to support two more columns of similar size and loading which will form a part of an additional bin of the same size. The foundations rest on pre-cast reinforced concrete piles.

The chimneys are built of reinforced concrete and are 250 ft. high. The outer wall is 12 in. thick at the bottom and 5 in. thick at the top. The walls taper towards the top and the upper 30 feet have no taper. They are very well proportioned and graceful in appearance. The chimneys are lined with a 4 in. wall of firebrick throughout the entire height. At 50 ft. intervals a concrete shelf is built on the inside of the stack on which rests the lining. The blast furnace chimney has a minimum inside diameter of 7 ft.; the two coke oven chimneys have a minimum inside diameter of 9 ft. and the power house chimney one of 13 ft. 6 in.

The boiler feed water is purified in two circular reinforced concrete tanks in which is installed a mechanical agitator. A reinforced concrete trestle was built on which the pig iron is transported to a loading platform; a reinforced coke loading plant was constructed which is supplied by apparatus supported by structural steel frame and not shown in the illustration. A reinforced coal storage, mixing, crushing and pulverizing building was constructed and is

supplied with coal by means of a structural trestle. A coke quenching plant was built of reinforced concrete. This consists of a gravity water tank, cooling water basins or reservoirs and an elevated structure made up of four walls which confine the spray and steam which arise from the flooding of the cars filled with hot coke.

Every part of the reinforced concrete construction in this plant is of interest to the engineer and includes almost every problem found in engineering construction. These structures were originally designed for the use of structural steel. Mr. Mensch submitted alternate designs and bids for concrete construction which were accepted, resulting in considerable saving in time and cost.

A New Way to Lay Brick

THE so-called "Ideal" brick wall is attracting much attention, and bids fair to become a widely used method, according to reports from men who have actually tried it out.

There are two types of the "Ideal" wall, one type being constructed with all the brick laid on edge, the other type being with the outside four inch thickness laid flat in the ordinary manner. The wall is particularly adapted to residence building and is an economical type for garages and all small structures having an ordinary floor load.

No special shapes or sizes of brick are required. It may be constructed with either face brick, common brick or combinations of the two, the standard size of either being 2¼ by 3¾ by 8 inches. It is recommended that the twelve inch wall be used for the basement and the eight inch wall for the remaining walls.

It is widely advertised that the new form of wall cuts from 25 to 35 per cent. of the cost of construction and produces a better ventilated wall and one having a very ample margin of safety for the residence class of construction.

A National Building Code

A STANDARD building code, which may be taken as a pattern by cities and which will promote the standardization of building methods and requirements throughout the country, will be undertaken by the Department of Commerce. This forecast comes from a most reliable source in Washington, D. C., with the further information that Franklin T. Miller, who has served as the assistant to the Senate Committee investigating the construction industry, may be asked to take charge of the work.

Oxy-Acetylene Used in Breaking Up Concrete

IN a building under construction in Cleveland, Ohio, considerable concrete work was put in through error. It was found necessary to remove the misplaced structure, and a crew of laborers assigned to the task attacked the concrete with sledges and drills. At the end of three days the progress made was so small that other and more rapid means of removal became imperative.

A demonstration proved the feasibility of speeding up the work with the oxy-acetylene torch.

The method employed consisted of heating along the line of the desired fracture with an ordinary welding torch, using a long bushy flame. The concrete was not raised to a great heat, as measured in terms of oxy-acetylene, but the heat was confined as much as possible along the proposed line of fracture. When so heated the concrete yielded to a heavy blow of the sledge, breaking off in the predetermined form and bulk.

This is not a new application of the oxy-acetylene torch, but, as it is a bit outside of its ordinary field, which is essentially the welding and cutting of metals, it is well to keep it in mind for emergency cases of the type noted. There are doubtless many other places where the torch might be advantageously applied in wrecking concrete.

Power Test Codes Are Being Framed

NINETEEN power test codes, constituting what their framers style a "national common law," in the field of power plant testing, are being framed by 125 leading engineers, scientists and educators under the auspices of the American Society of Mechanical Engineers.

The codes, when completed, will affect a wide range of industrial enterprises, large and small. They will provide courses of procedure by which everything from an electrical superstation to a boiler feed pump shall be tested to see if they comply with the terms of purchase or if they are operating at the desired efficiency.

The committeemen represent engineering societies, manufacturers, public service corporations, national, technical and scientific associations, railroads and government agencies, including the Bureau of Standards and the U. S. Naval Academy.

What was one of the most important public hearings and discussions held by engineers took place in Chicago during the sessions of the spring meeting of the American Society of Mechanical Engineers, May 23-26. Three codes were presented to the A. S. M. E. for consideration and adoption at this session.

Professional Society Organized in Spain

ENGINEERS of Catalonia, Spain, have organized a professional society similar to the American Association of Engineers, under the title, General Technical Society of Catalonia. According to a statement in its introductory bulletin, just issued, the society is organized for cultivation of the common interests of engineers, for participation in bringing about a solution of the "social struggle of our times,"

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for contributing to the settlement of the conflict between employing and laboring classes, and for upholding the profession of engineering in public life. Manuel Vidal is president, Alejandro Hommedieu is secretary, and Manual Escude is corresponding secretary. The addresses of the two latter are Calle San Salvador 61, and Calle Laforja 12, Barcelona.

University of Colorado Course in Municipal Design

A COURSE in municipal design, embracing the town plan, streets, water supply and sewer system, is being given in the senior year of the course in civil engineering at the University of Colorado.

J. B. Marcellus, associate professor of civil engineering, is in immediate charge of the course.

Pennsylvania May Tax Cement

IT is announced from Harrisburgh Pa., that the legislative committee in search of new sources of revenue may tax cement production at its source. It is reported that a tax so placed would bring into the state about $2,000,000 a year. Already in the draft of the bill are taxes on minerals, lumber, oil and gas.

Dust Explosion Hazards in Designing Buildings

MR. DAVID J. PRICE, engineer in charge Grain Dust Explosion Investigations of the United States Department of Agriculture, Bureau of Chemistry, gave a talk before the Western Society of Engineers, Chicago, Ill., on March 28, 1921. His talk entitled "Dust Explosions" was printed in full in the May, 1921, Journal of the society.

An interesting fact of value to architects, given by Mr. Price, is that "there is not a type of electric lamp made but that when the bulb is broken will produce dust explosions immediately if there is the proper proportion of dust in the air." This means that the use of unprotected electric bulbs in dusty atmospheres is unsafe. A mere wire guard is insufficient; the covering must be vapor proof. The investigation also showed that dust settling on bulbs may be heated to incandescence and lead to resulting fires and explosions.

Proper designing against dust hazards requires electric lamp bulbs to be properly protected, proper control of static electric conditions in certain types of milling machines, proper systems for controlling dust deposits and approved methods for collecting dust. Verily, the modern planner and designer of buildings must be up and doing to keep track of developments. A building is no longer merely a structure having walls and roof; it is chock full of temperament to a degree rivalling a petted stage favorite.

Building Cost Estimates

MR. BARCLAY WHITE, a Philadelphia builder, gave the following weighted estimates of component costs of buildings at the February, 1921, Philadelphia Conference on the Construction Industries.

He assumed a composite building in the Philadelphia territory, consisting of a reinforced concrete factory building; slow-burning or heavy construction warehouse with brick walls; typical two-story dwelling; detached brick and frame residence; stone school house with wood floor construction; fire-proof institutional building; an apartment house; a steel frame office building. From his own records of costs he selected a typical instance in each of the eight types, divided it according to actual costs into labor and materials and weighted these costs according to the volume of each of these classes in the territory.

The total for all skilled labor, which includes stone cutting, shop work on stairs, mill work and sheet metal aggregates 27.55 per cent. on the total cost to the owner. Unskilled labor amounts to 9.44 per cent., general supervision, engineering and estimating 5.60 per cent. and liability insurance is 1.41 per cent., bringing the total direct building labor cost to 44.0 per cent. of the completed building.

Materials cost as follows: lumber, 8.86 per cent.; brick delivered on site, 6.10 per cent.; structural steel fabricated in shop and delivered on site, 5.93 per cent.; boilers, piping, etc., on site, 5.81 per cent.; cement, f. o. b. cars Philadelphia, 2.60 per cent.; hardware and nails, 1.78 per cent.; sand delivered, 1.69 per cent.; all electrical fixtures and materials, 1.60 per cent.; stone for concrete, etc., 1.49 per cent.; all other materials, 7.02 per cent.; making the total for materials 42.88 per cent., or a little less than the direct building labor costs.

Office rent, general expenses and overhead, but not including office wages, amount to 5.80 per cent. Sub-contractors' net compensation is 3.90 per cent and net compensation of general contractor is 3.42 per cent. It is assumed that sub-contractors do about 65 per cent. of the work; the general contractor does about 35 per cent., and, in addition, directs and supervises the balance.

STATE SOCIETIES

Extracts from a Paper Presented to the Fifty-Fourth Annual Convention of The American Institute of Architects by Delegates from Four Societies in Western States

THE delegates representing the State associations of architects from Illinois, Michigan, Indiana and Idaho, who were invited as your guests at this convention, desire to express their appreciation of this opportunity of meeting with you and desire at this time to make clear their united opinion regarding mutual affairs.

We believe there is great need for all architectural societies to co-operate in upholding a high standard of architectural practice. We recognize the American Institute of Architects as the society "par excellence." We concur with your board that it would not be wise at this time to do anything more than establish "a flexible point of contact" between our respective organizations.

The State societies are, however, seeking and earnestly desire closer co-operation. The State societies, due to their simpler form of organization, have a wonderful opportunity of uniting for good of the profession a large coterie of men who otherwise would be standing alone.

The code of ethics adopted by these societies is modeled after that of the Institute and there truly is an earnest effort being made on the part of its members to fully live up to these high standards. The records of these State societies show strict discipline over their members which tends to produce a closer observance of the code of ethics than would be otherwise.

THE State societies being organized primarily to look after the business end of the profession can and do relieve the Institute chapters of much of this work, so that they can, if they so desire, devote more of their own energies to the ethics of the profession, as was their early practice.

That a closer co-operation may be had we respectfully suggest that the Institute appoint a standing committee on State societies, said committee to be composed of four members who are also members of some State architectural society, and that each State society be requested to form a like committee on American Institute, which said committee shall have at least one architect who is a member of the Institute. It is obvious that the duties of these several committees would be to keep fully posted by correspondence or otherwise as to objects where both the Institute and the society could be of mutual assistance, and to do their utmost to bring about the desired co-operation.

It is sympathetic and practical co-operation we are seeking, and we urge this convention to give these matters its earnest consideration.

We believe that the organization of the National Council of Architectural Registration Boards will prove a tremendous power for the profession at large, and being composed of architects who are members of the several State examining boards, they will be and undoubtedly are the leading powers to accomplish that much desired proposition of having high grade uniform license or registration laws with uniform standards for examinations.

Here at least is one illustration where full co-operation on the part of all would be practicable and desirable. When the committees above referred to shall have become a working factor, surely better understanding and co-operation, obtaining greater results will be our mutual reward. We also believe it wise to bend our efforts in conjunction with the Institute in bringing about a condition in all the States such as will permit of a model registration law —to that end we pledge ourselves and our State societies to co-operate with the Institute in having a comprehensive building code adopted in our States as soon as feasible, so as to make it possible to have enacted a law which will protect the use of the title "Architect." When this millennium arrives the engineers and architects will be the best of friends, and all jealousies and animosities buried forever. May we not ask the Institute actively to push this problem for the coming year?

May we also suggest that it is our opinion that it would prove mutually beneficial if the 2,000 members of the State societies could receive the Institute Journal at the same price sold to your own members?

INDIANA STATE SOCIETY,
By Herbert W. Foltz.

ILLINOIS SOCIETY OF ARCHITECTS,
By H. B. Wheelock.

IDAHO SOCIETY OF ARCHITECTS,
By Burton E. Morse.

MICHIGAN SOCIETY OF ARCHITECTS,
By W. G. Malcolmson.

Architects' "House Organ" Issued

THE Washington State Chapter of the American Institute of Architects has inaugurated the issuance of a monthly bulletin. The bulletin is intended to be a "house organ," devoted to the activities of the A. I. A. and its members, and will be circulated among the A. I. A. members throughout the State of Washington.

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English Architects Meet

THE recent meeting of the Architectural Association in London was pervaded with a sense of dominating personality rather than any quality of serious discussion, an atmosphere of ideas, ideals and great enterprise.

Mr. H. Gordon Selfridge, whose subject was announced as "Architecture in Commerce," did not lecture, but spoke generally of many things, of the duty to the State of commercial men, the influence of fine work on the people, of tradition, taste, "correctness" and such-like—all great sounding phrases and words—the food upon which the architect is reared, but coming from a commercial magnate such words carried an unusual weight.

Many valuable thoughts were brought to mind, not all new ones, but which, being familiar, are often overlooked.

Mr. Selfridge apparently sees beauty in horizontality and discerns no "charm of proportion" in the skyscrapers of his country.

He spoke eloquently of the influence of fine work, and instanced the benefit derived by the many thousands of people who passed daily through the great stations of New York.

The vexed question of the "Public"—about whose taste the architect so frequently complains—was seen from a different angle. The success of a great business depends, to an appreciable extent, upon the thorough and sympathetic understanding of its patrons and the "up-to-dateness" of its organization.

Considered action with a definite policy soon convinces the public, and the advertising experts to great enterprises have understood and made use of this, to the enlightenment of the public and betterment of their concerns. Mr. Selfridge suggested that perhaps architects might adopt a similar policy. Create a sort of professional "Calisthenes" to drum and keep on drumming into the public the truths of architecture till in time it will believe them: architecture explained popularly and with "punch"! The public may not know now, but then no one has told it!

Perhaps architects do not quite see their art in this light, but there is something to be said for the much abused "public."

The plate-glass "bogey" was, of course, in evidence. Why should this always lead to so much discussion between architects and men of business? There appears to be sometimes too great a desire for glass on the part of the shopkeeper, and too strong a craving for "columns" on the part of the architect, but it is surely a question of adjustment of values and a better understanding of conditions.

Shops are not all of one kind; and in the same way that the patrons of one store differ from those of another so the quality of the wares will differ and consequently the requirements vary. The store with the choicest wares does not confuse one with another by "piling" them behind vast stretches of glass, but by carefully framing each piece or group of pieces creates a contrast which enhances the beauty of the wares. With such a store the architect's problem is comparatively easy. But there is a much more difficult one in the case of the store where the policy is to show as much as possible to the passing crowd, where glass is all important, and the shopkeeper is not entirely to blame if the architect sometimes, against his better judgment, allows great "architectural" lumps of stone to be used over plate glass with no apparent support. Fortunately, however, this policy appears to be receiving modification in our large stores. The value of a great architectural treatment to the shopkeeper is great, it forms a suitable setting to his wares. By its distinctive character it is recognized and talked about, while it is a means of advertisement it is also an embellishment to the city.

A factor which has greatly influenced the development of stores in recent years is the necessity for much more serious consideration for the welfare of the employees. It is recognized that the success of the undertaking is largely due to the efforts of the staff and much is done to foster their interest in the work until it becomes vital to them, until, as Mr. Selfridge said, "they would come in the morning without regret and leave at night, at least, not with a sigh of relief."

The meeting was a spirited one and Mr. Selfridge was recognized as a great enthusiast, and enthusiasts, whatever their creed, are always welcome to the Architectural Association.

Industrial Teachers' Scholarships in New York

THE University of the State of New York is offering twenty-five scholarships to qualified trade and technically trained persons who desire to prepare themselves for teaching. Persons selected to hold these scholarships who satisfactorily complete the prescribed one year resident industrial teacher training course are licensed for life to teach their specific occupations in the vocational schools of the State. The salaries paid vocational teachers now range from $1,800 to $3,500 per annum.

Each holder of the scholarship will receive at least $1,000 for the period of one school year. This amount is paid in ten equal installments. Holders will be required to be in attendance for ten months in the Industrial Teacher Training Department of the State Normal School at Buffalo.

Applicants for appointment to the industrial teachers' scholarship must possess the following qualifications:

1. *Trade, industrial or technical experience.* At least five years of successful all-round experience in work of not less than journeyman's grade in some trade, industrial or technical occupation.

2. *Education.* A good general education and ability to speak, read and write the English language.

3. *Age.* Not less than twenty-one or more than thirty-six years of age on August first of the year in which the appointment is made.

4. *Health and character.* Of good moral character and in possession of good health.

5. *Citizenship and residence.* A citizen of the United States and a resident for one year of the State of New York.

On the basis of the qualifications of the candidates a merit list will be set up for each trade, industrial or technical occupation. There will be no formal examination but candidates will be rated by examining committees as to general education, practical experience, loyalty, moral character and physical fitness. Candidates may be required to appear before the examining committees for a personal interview.

The twenty-five scholarships will be awarded to qualified persons with all-round experience in the following occupations:

Electrical construction, repairing and operating. Machine shop work. Automobile repairing. Machine drafting and designing. Architectural drafting and designing. Sheet metal working. Printing, including presswork and composition. Bricklaying. Painting and decorating. Carpentry.

Detailed information and blanks upon which applications for scholarships may be made should be secured very promptly. The Director of Vocational and Extension Education, State Department of Education, Albany, N. Y., will furnish this material and information upon request.

Paris to Have Mosque

THE city of Paris is soon to have its first mosque for the benefit of the Mohammedans in French possessions in northern Africa, Algeria, Tunisia and Morocco. The people of those colonies have subscribed to a fund for the erection of the building and Algeria has nominated an iman, or leader for the mosque.

Two Small Books Which Interestingly Illustrate Designs by Batty Langley

PROBABLY no architectural author was more prolific than Batty Langley and no man has had greater influence on his contemporaries and successors. The large volume of his drawings makes it difficult to believe that one man could accomplish so much in a lifetime. Born in 1696, he lived for but fifty-five years. He was thirty years old when he published his first work, so that in the quarter century which followed must be placed the voluminous series of drawings of which he was the author.

Two small books, 4½ x 5½ inches, published by John Tiranti & Co., London, and sold in this country by the U. P. C. Book Co., 243 West 39th Street, New York City, have been issued, containing in a reduced form copies of important plates by Langley. One is called "The Builder's Jewel," the other "A Treasury of Designs." These are somewhat remarkable by reason of the clearness of the reproduced plates, and there can be no question as to their educational value not only to architectural students, but also to the man in practice.

Plan Burroughs Memorial

PLANS are under way for the formation of a John Burroughs memorial association to take charge of Slabsides, Riverby and Woodchuck Lodge —the three places most frequented by the poet-naturalist who died recently.

The plan has already been approved, and a committee chosen to take charge of the work.

Two Churches Under Reims

Ruins of Fifth and Ninth Century Structures Found Beneath Cathedral

THE ruin of Reims cathedral has brought to light the buried remains of its predecessors, states *The Living Age.*

Under the pavement of the choir, which was broken into fragments by German shells, workmen found the old foundations which had once supported the noble cathedral of Saint Hincmar, burned down in the ninth century. Delving lower still, they came upon traces of the first church to stand on this hallowed ground, that of Saint Remi, missionary bishop of the early church, who baptized Clovis, the first Christian king of France, early in the fifth century.

Under the broken high altar they found 250 ancient pieces of silver and—what is even more precious —a long sealed well, with water still at the bottom. From this well turns a conduit in worn lead piping, from the direction of what it is now possible to place with certainty the long vanished baptismal font where Clovis was received into the church.

A Proposed Erection of Permanent State Buildings in Washington, D. C.

THE project looking to the erection in Washington of state buildings by all of the 48 states, to house permanent exhibits and serve as headquarters for visitors, is one which if fairly begun would grow fast. At all the expositions held in recent years the various states constructed buildings which held exhibits of their products and resources. Thus, while advertising the advantages of the states, they also served as headquarters for visitors from the respective states. The proposal now under consideration is along the same line, except that it contemplates the erection of permanent instead of temporary buildings.

Hundreds of thousands of visitors come to Washington every year, and if each state had its own building here every man, woman and child would take pride in registering in his own state building and thus identifying himself with his own home.

The proper place to locate these buildings would have to be determined by the commission of fine

arts or some other body qualified to preserve the artistic beauty of the city. There is, however, plenty of space available for the purpose and there would be little trouble in having Congress make provision for the necessary sites.

Once the project is under way and one or two of the larger states have appropriated the money for state buildings here other states would follow suit, for local pride would be sufficient incentive to induce them to co-operate. Intelligent and energetic work is all that is needed to give the plan the necessary impetus.

Ancient Stone Plaque

A STONE plaque which is believed to be about six thousand years old has recently been unearthed at Graig-lwyd, Penmaenmawr, Wales. The engraving was done in Neolithic times, probably by men of the Iberian race; triangular symbols form the pattern. The plaque is now in the Royal Institute of Anthropology at London.

Rotch Scholarship Award

THE Boston Society of Architects recently awarded the Rotch Traveling Scholarship to Frank S. Carson, of Boston. The second award went to Victor L. S. Saffner.

Michigan Chapter, A. I. A.

ON the evening of May 25, Harvey W. Corbett. of Helmle & Corbett, architects, addressed the members of the Michigan Chapter of the American Institute of Architects in Detroit on "High Buildings in Relation to Narrow Streets." Early in the afternoon he also spoke to the students of the College of Agriculture at the University of Michigan.

In April, Frederick L. Ackerman, A.I.A., spoke to the Chapter and to the students of the university on "Building Conditions."

The profession at large and students have much to gain from the willingness of architects to take time away from their offices to give such lectures. It is a form of service which, while involving no compensation, is of great value.

Unearth Thessalian Temple

ACCORDING to press reports, Greek Archæologists have unearthed an imposing temple at Rerras, Thessaly. The structure is in an excellent state of preservation and is stated to be as large as the Temple of Jupiter at Olympia. The bronze inscriptions establish the date as 400 years B. C. Numerous tablets have also been found bearing indications of laws and resolutions of ancient civilization.

This is the second temple which has been discovered within a month, the first having been found near the city of Volo. The excavations are continuing.

Personals

Ross & McNeil, architects, formerly located at 45 West 34th Street, New York City, have removed their offices to the Masonic Hall, 46 West 24th Street.

Giaver & Dinkelberg, engineers and architects, have moved their offices to 500-504 Wrigley Building, Chicago, Ill.

Alfred C. Clas announces that he has entered into a partnership with John S. Shepherd and Rubens F. Clas for the general practice of architecture under the firm name of Clas, Shepherd & Clas, with offices at 202-206 Colby-Abbot Building, Milwaukee, Wis. They are desirous of receiving manufacturers' catalogs and samples.

Frederick Ehrsam, architect, has moved his office from 922 Penn Street to the Mt. Penn Trust Company Building, Reading, Pa.

Fetherstonhaugh & McDougall, architects, announce the removal of their offices from 823 Drummond Building to 85 Osborne Street, Montreal, Canada.

William P. Callahan, architect, 22 Basto Terrace, Boston 31, Mass., is desirous of receiving manufacturers' catalogs and samples.

The Greisler-Abramson Company, architects and engineers, has moved its offices from 523 Lafayette Building to 1033 Walnut Street, Philadelphia, Pa.

Henry C. Pelton, architect, announces the removal of his offices to 151 West 42nd Street, New York City.

Charles B. Meyers, architect, formerly of 1 Union Square, West, New York City, has moved his offices to 31 Union Square, West.

Meisner & Uffner, architects, have opened offices for the practice of architecture at 501 Tremont Avenue, New York City, and are desirous of receiving manufacturers' catalogs and samples.

Kilham & Hopkins, architects, 9 Park Street, Boston, Mass., announce that Mr. William Roger Greeley, having been admitted to the firm, the name will hereafter be Kilham, Hopkins & Greeley.

William Albert Swasey, architect, announces the removal of his offices to the Gotham Bank Building, Columbus Circle, New York City.

HOUSING REPORT of the CHAMBER of COMMERCE of the UNITED STATES

WASHINGTON.—The need for adherence to fundamental policies and standards in new housing projects is emphasized in a report prepared by the Civic Development Department of the Chamber of Commerce of the United States which suggests a housing program for American municipalities.

"Housing is a longtime proposition," the report says, "While we may hope that the present acute shortage will be relieved during the next two or three years, we shall have missed a great opportunity if we do not seize the advantage presented by today's interest to secure adequate and satisfactory housing accommodations for the future."

This report was prepared in accordance with a resolution adopted at the housing conference held in Washington last January by the Councillors of the National Chamber. The resolution provided for "a thorough study of the housing situation." The report urges the appointment, where necessary, of a housing committee to estimate the facts; to consider and make recommendations on matters of policy; to encourage the work of other approved agencies.

It is pointed out that the facts as to housing conditions may be ascertained by studying local building construction statistics and by a local housing survey. After the facts had been secured and carefully studied, the report states, a local housing policy should decide:

1. What types of dwelling should be encouraged?
2. Should land values be concentrated in a small area or should they be spread more evenly throughout the community and stabilized by distributing centers of employment, and by the adoption of zoning regulations?
3. Should attention be confined to immediate needs, or should the effect of present work upon the future development of the city be considered?
4. Should all effort be confined to securing the erection of houses immediately, or should some thought be given to their future maintenance?
5. If it is decided to organize a house-building company should this company build to sell; to own and rent or to manage on a mutual basis?

"After policies have been decided a plan of action to give such policies concrete effect must be developed. The report tells of three plans which have been used in various localities, as follows:

1. Aiding local men or firms engaged in building, by the organization of a financing company which will make funds for house building more readily available. Financing corporations of this type have been organized in Akron, Detroit, Minneapolis, Pontiac and other cities.
2. Persuading local industries to erect houses for their employees, as illustrated by the industrial housing corporations in Middletown, Ohio; Allwood, New Jersey; Beloit, Wisconsin; Flint, Michigan; Janesville, Wisconsin; Akron, Ohio; Woodlawn, Pennsylvania; Kohler, Wisconsin; Fairfield, Alabama; Gary, Indiana; Duluth, Minnesota, etc.
3. Organizing a civic or community housing corporation, either by (a) a group of industries, primarily for the purpose of housing their own employees, or (b) by public spirited citizens for the general well-being of the community. Developments of the above types have been undertaken at: Battle Creek, Michigan; Bridgeport, Connecticut; Cleveland, Ohio; St. Louis, Missouri; Lockport, New York; Philadelphia, Pennsylvania; Washington, D. C.; Wilmington, Delaware, etc.

Local housing experience in the past has shown that one of the big problems to be solved is how to raise the necessary capital. After studying 57 housing and financing companies the Civic Development Department reports that 46 secured their capital by local subscriptions from individuals; 4 obtained it in part from banks, insurance companies, etc., and 1 from the parent company. The report enumerates the sources from which capital may be secured.

Local bank and trust companies; building and loan associations; local subscriptions; life insurance and other fiduciary companies; government aid as by the organization of home loan banks and in other ways.

The report lays special emphasis upon the high cost of building and efforts aiming at reduction thereof. Until cost of house construction reaches a basic level it is not believed that there will be an adequate amount of building. Special attention is given to local conferences of persons or interests directly concerned in the building industry, which conferences provide a basis for compromise and agreement. The reports suggest a number of points that might well be considered in connection with conferences and meetings of this kind.

Second only to the high cost of building as a deterrent to investment in new housing is the general belief that houses erected since the war are not as well built as the older houses. Among the various methods to improve the character of building construction the report enumerates: the practice of giving prizes for best buildings; professional codes of ethics, and building and housing needs. The need for good management is emphasized.

In closing, the report calls attention to the city planning and zoning aspects of housing developments. In this connection the report states that: "A well-planned city not only makes better provision for its housing than does one which grows haphazard, but it greatly increases the security of housing investment by minimizing the likelihood of areas being blighted through the introduction of incongruous developments. This stabilization of values is increased by zoning regulations which determine the use, height and lot occupancy of buildings permitted in any given district."

THE BUILDING SITUATION in CHICAGO and the MIDDLE WEST

(Special Correspondence to THE AMERICAN ARCHITECT*)*

CHICAGO.—Owing to the exigencies surrounding the publication of a large magazine such as THE AMERICAN ARCHITECT it sometimes happens that things set down in prophecy by the writer at long-distance become matters of history before the eye of the ultimate dealer strays across the prediction. Such a prefatory warning is necessary in discussing, for instance, the rather mercurial building situation in this important center.

As this is being written in the closing days of May, the building tie-up continues in full force, with only an occasional indication of an early termination. The fact that the opposing interests are meeting at the conference table gives hope, rather than belief, that something may come out of the tie-up shortly and that building soon may be resumed.

Be that as it may, however, the importantly distressing fact remains that a full month of good working time has been eaten out of the building season as far as Chicago is concerned by the inability of the building trades unions and the associated contractors to get together on a working basis of wages. The contractors are still insisting upon a reduction of from $1.25 to $1.00 per hour for the skilled builders and from $1.00 to 70 cts. per hour for the unskilled labor. There have even been suggestions on the part of some contractors that this is the opportune time to reinstate the old working basis of 87½ cts. per hour for skilled labor which was thrown into the discard under pressure of war-time emergencies. The union officials are holding out for a compromise wage, say around $1.10 per hour, and the latest communication from the union camp is a plea for arbitration. The contractors, recognizing the superior strategic position which they now occupy, are insisting that there is nothing to arbitrate and that an unconditional surrender is the only thing that will reopen building on the important jobs over which they have charge.

The tie-up has been very effective on all principal building projects. Those in process of construction have been gathering cobwebs for a month and those under immediate contemplation have been pigeonholed for the time being.

The upshot of the wrangle and the delay is to convince the growing crop of Chicago building pessimists that the building boom is not to come to its greatest expansion in this city during the present year. There will be considerable building, it is admitted, if the wage tangle can be adjusted, but the big boom will not really get under way until next year and the proportions of the building program are sufficiently large to insure great activity here for four or five years.

The labor alone is not the only obstacle in the path of the building program, as has been previously outlined in this correspondence in THE AMERICAN ARCHITECT. Still a more emphatic deterrent is the growing public dread of union "shakedown," materials combinations and other unholy barnacles which have attached themselves to the good ship Progress in these murky waters.

Chicagoans who know their way about have long been convinced that Denmark has had no corner on rottenness, to borrow an allusion from the Bard of Avon. But it has required the scintillant illumination afforded by the Dailey legislative inquiry into Chicago building conditions to bring the whole matter prominently before the people of the city. The Dailey Committee, which has been grinding away very effectively for several weeks, has succeeded in uncovering so much corruption in the building situation that no less than three grand juries are now busy turning out indictments while you wait. A federal grand jury, an ordinary grand jury representing the state system of law and order, and a special grand jury empanelled to relieve the congestion have all been busy. Up to this time a total of nearly 200 indictments have been returned. These charges affect manufacturers, wholesalers, union officials and others intimately connected with the building trade. A variety of unholy combinations has been unearthed. Manufacturers are accused of combining to keep prices up and union agents are accused of combining to shake builders down. Between the "ups" and the "downs," it is palpably obvious that the builders of Chicago have been encompassed by an inescapable ring of graft.

Architects have escaped any accusations of wrongdoing. Apparently, they have been attending to their business and making the best headway possible under the present conditions. That the architects have known for a long time of the impossibility of escaping the "shakedown" on one side or the other, is made clear by the testimony of architects before the Dailey Committee. According to this testimony, architects have set a fixed charge of one per cent. of the total building cost as a fund for paying off graft leeches, mainly from the union sources. This charge has been added in just as any other building charge and the one per cent. has been none too great to meet the rapacious demands that have come from various sources beginning with the excavation and ending only with the hiring of janitors.

Whether anything will come of the reeking exposures in the building trades remains, of course, to be seen. Chicagoans, taken in the mass, are not particularly hopeful. Things have a way of being forgotten in this fair city and the union officials, not to mention the affected manufacturers, are in the habit of using every ounce of "pull" which they possess. Unquestionably, however, the revelations, unsavory as they are, have had an effect upon the

prospective investors in Chicago buildings. Men with money to invest in building and with a former desire to make such an investment are now hesitating, because they have no desire to enter a field so honeycombed with graft.

The building industry, pressed forward by the city's growing needs for buildings of all kinds, will undoubtedly outgrow the present dwarfing exposures, but the effect is being felt just now and it is perhaps as well that all of the diseases have afflicted the poor, prostrate patient at the same time. When the recovery comes, it is not likely that there will be any relapses, for there will be no other diseases for the victim to undergo.

Many building permits, while not yet officially announced, are expected to show an important decline as compared with April, 1921, or with May, 1920. Building permits are, however, an uncertain barometer of building conditions, because many of the permits issued months ago have not yet resulted in any activity.

Reports continue to be heard of important projects which are now about ripe.

One of the unusual propositions now being considered is the proposed First Methodist Church to be built at the corner of Clark and Washington streets in the heart of the Loop district. From present plans it will be unique not only as a church, but as an office structure, and will dwarf many of the other so-called skyscrapers in the business section. The building will be at least twenty-two stories high and will be capped by an immense steeple, which will bear an illuminated cross. Thus the outstanding sign of the Chicago business district will be the sign of God and not the bustling illumination of Mammon. The cost of the church will be $3,000,000.

As if the $3,000,000 religious edifice may not prove sufficient to save this encardined city from its wickedness, the city and county, aided by the Chicago Plan Commission, are planning the erection of a $9,000,000 jail and criminal court building. A proposed bond issue for that amount is shortly to be voted upon, and since bond issues almost invariably carry in Chicago elections, the funds may be considered as already provided.

The plan contemplates the razing of the present inadequate criminal court building, and the construction of a skyscraper, occupying an entire block at Austin Avenue and Clark Street. In this building would be centered all of the criminal court activity of both the city and the county.

The volume of building now actually in progress is insufficient to provide any fixed demand for lumber and building materials and the market accordingly is decidedly apathetic.

Prices in both lumber and materials are merely nominal, the buyer with the spot cash being able to secure better figures than his less fortunate brother. With the resumption of anything approaching normal demand for lumber and other materials there will doubtless be an almost complete revision of prices.

BUILDING CONDITIONS on the PACIFIC COAST

(Special Correspondence to THE AMERICAN ARCHITECT*)*

SEATTLE.—Although the demand for building labor has fallen off slightly during the past two weeks, the demand from cities adjacent to Seattle has more than offset the decrease. In Seattle building labor has been in fair demand on work of short duration such as repair and maintenance jobs. With the increase in residence and other construction of a larger nature this class of labor is expected to be called in larger numbers from week to week. Farms and dairies in the North Coast country continue to place orders, although the number shows a reduction over the preceding several weeks. The number of the unemployed men in Washington and Idaho is estimated at between 12,000 and 15,000, but by July 1, through increased construction activities, it is thought that this number will be reduced fully 50 per cent.

The purchase by the Barde Industrial Corporation of an industrial tract in the southern portion of Seattle was the most significant entry of the past two weeks in the brighter outlook for Summer. It is the plan of the buyers to erect suitable warehouses on the property for handling 10,000 tons of steel. About 60,000 square feet of floor space has been provided. The contract has already been let.

The cement market on the coast is stiff. The only two reductions since last Fall were made by the dealers in the decline in sacks and in reductions of their gross margins. Road construction on the Pacific Coast this season, according to the number of contracts now being let, promises to absorb any surplus of cement that might appear at the plants and thus keep the market strong.

There is a slight increase in the demand for sheathing paper. Roofing, plaster and plaster wall board are steady. The brick market remains unchanged.

Probably the most encouraging feature of a return to normal conditions in the fir lumber industry is the voluntary wage reductions from $3.60 to $3 base by the Loyal Legion of Loggers and Lumbermen, the force that was organized during the war to keep out sedition and sabotage in the fir mills and camps. The eight hour law will be observed, but conceding that the bottom of the lumber market may not have been reached, that logs are declining in price and that the demand is expected to be light through the Summer, the Legion officially ad-

vised the employers of the new low minimum. This move will undoubtedly result in speedy starting up of many idle lumber mills and bring the percentage up from 70 to 100 per cent. normal.

Average prices at which the mills are now selling building sizes of lumber at the mills are as follows: No. 2 and better 1x4 vertical grain flooring, $47; No. 3, $16 to $25; No. 2 and better slash grain flooring, $19.25 to $24.25; finish, $44 to $51; No. 2 and better ⅝x4 ceiling, $20; 1x4 No. 2 and better slash grain ceiling, $21; drop siding, $20; boards and shiplap, $12.50; common dimensions, $10.50.

The red cedar shingle market is stronger. The mills are sold up for twenty days. Log prices are rising, due to scarcity and practical suspension of logging operations.

Intercostal and deepsea steamship lines about six months ago abolished the crating rule, permitting coast manufacturers of doors to load loose. As a result, manufacturers on Puget Sound have sold and loaded 200,000 doors to the United Kingdom. A brisk enquiry has developed on the Atlantic seaboard for fir doors.

Storage of red cedar shingles, principally 18-inch stock, is about to begin at Tonawanda and Buffalo, according to enquiries from operators in that territory. Low rates intercostal and the Erie barge canal as compared with the all-rail haul seem to be the incentive. It is believed here that the shingle market is on the turn.

What Is Radically Wrong?

A GREAT many persons have asked either themselves or others this question of late, and there have been few answers so completely satisfactory as this one by George D. Roberts, vice-president of the National City Bank of New York. Mr. Roberts is one of the keenest students of our economic and industrial situation in America, an official in one of the world's really great banking institutions, and a banker of international repute.

This is Mr. Roberts's answer to the question:

"It is a common declaration in these days, uttered usually with an air of profundity, that there must be something radically wrong with society, that millions of people should be out of work, millions more unable to sell their products and millions suffering want. Since something is assumed to be radically wrong it presumably follows that something ought to be done about it, and the talkers generally are ready to do it, although the ideas of such people as to what should be done are exceedingly vague.

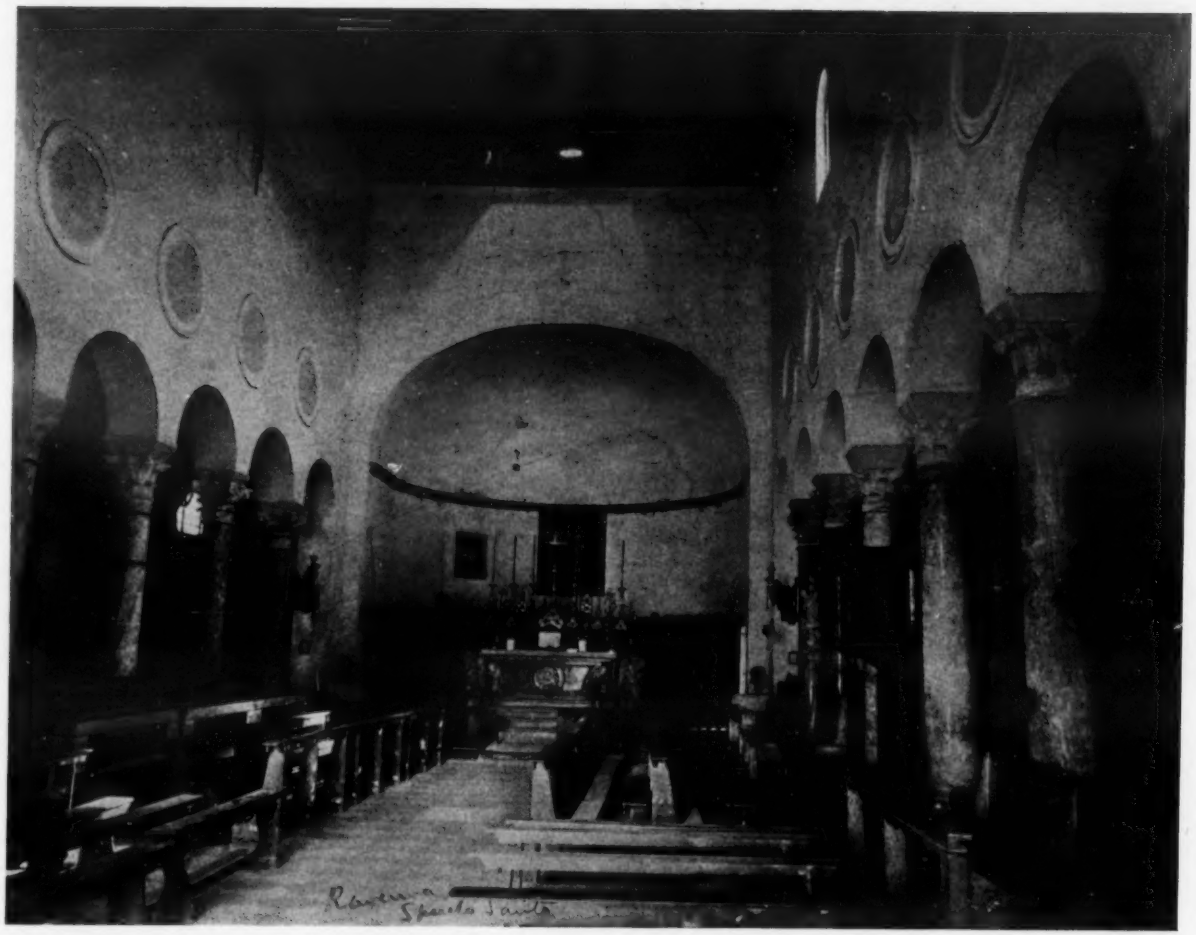
"It is admitted that something is radically wrong. It is wrong that great numbers of people should be so ill-informed about economic affairs that instead of acting in a manner calculated to secure cooperation and stability they use their influence to break down the delicately balanced industrial organization and create confusion and disorder. The modern industrial organization is dependent upon intelligent, voluntary, harmonious cooperation on the part of all the people. It requires that the people shall distribute themselves according to choice in the various industries, and so direct their individual policies as to keep the industries in balance and accomplish a ready exchange of products. If through mistaken ideas of self-interest they organize themselves into groups, either national groups, class groups, or occupational groups, and become so intent upon forwarding group interests that they lose sight of the necessity for general cooperation, the whole modern system of highly-developed industry will break down. It will be strangled by too much organization. There is indeed something radically wrong with society, and this is it."

Unemployment in Great Britain

A SUMMARY of unemployment in Great Britain issued by the British Ministry of Labor indicates, states the foreign information section of the Bankers Trust Co. of New York, that in the latter part of March over 2,000,000 persons in some 80 lines of industry coming under the scope of National Unemployment Insurance were wholly or part time without work. Of this number, according to the official detailed figures, which have just been received by the Bankers Trust Company, of New York, from its English Information Service, 1,355,206 persons were wholly unemployed, and 838,662 were on part time.

By the middle of April the number wholly unemployed had increased to 1,686,900. Government unemployment benefits and out-of-work donations of £1,563,000 were paid in the week of April 9, compared to £999,000 in the preceding week. Under the Unemployment Insurance Act benefits range from six to fifteen shillings a week, the lower amount being paid to young girls and the maximum to men. Not more than 15 weeks' benefits can be received in one year. Employes, employers and the Government support the insurance fund. Contributions from employers and employes run from 3½ pence to 8 pence per week for each person insured, the firm and the worker about equally sharing this expense.

The Labor Ministry's detailed summary shows that the greatest number wholly unemployed in a single industry were engineering trades workers but the greatest number on part time were in the cotton textile industry.



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